

SB 2656

Measure Title: RELATING TO THE MODERNIZATION OF THE HAWAII ELECTRIC SYSTEM.

Report Title: Grid Modernization; Hawaii Electric System; Public Utilities Commission; Appropriation (\$)

Description: Requires 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. 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.

TESTIMONY OF HERMINA MORITA
CHAIR, PUBLIC UTILITIES COMMISSION
DEPARTMENT OF BUDGET AND FINANCE
STATE OF HAWAII
TO THE
SENATE COMMITTEES ON
ENERGY & ENVIRONMENT
AND
COMMERCE & CONSUMER PROTECTION

FEBRUARY 4, 2014
2:45 p.m.

MEASURE: S.B. No. 2656

TITLE: Relating to the Modernization of the Hawaii Electric System

Chair Gabbard, Chair Baker, and Members of the Committees:

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 person, business, or entity can make a safe and reliable interconnection on the Hawaii electric system in a timely manner and for a reasonable cost" so long as that person, business, or entity 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 any person, business, or entity can "operate customer generation" without respect to where the person, business, or entity 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 \$750,000 is provided for the regulatory proceeding.

POSITION:

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

COMMENTS:

While the title of S.B. No. 2656 is intended to address the grid modernization of Hawaii's electrical system, the Commission is concerned that this legislation, as written, is 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 timely review, safe interconnection, and cost-effective installation of customer-sited generation, 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, but such decisions should not be made at the expense of other electricity customers who may have limited or no alternative energy options. Nor should these decisions be made at the expense of electric system reliability. Actions and decisions recently taken by the Commission, as well as the work related to pending decisions, are highly supportive of a diverse portfolio of cost-effective renewable energy resources and the State's overall clean energy policy goals aimed at benefitting all electricity ratepayers. As technology evolves and electricity customers' choice of energy options increase, cost and rate structures must also change by charging a fair price for services provided by the electric grid and paying electricity customers a fair price for the grid benefits they create to ensure a robust and stable electric grid. These issues of interconnection standards, cost allocation, and rate design are best addressed through Commission procedures and tariffs.

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 benefit-cost 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 rate class), while compensation at the retail rate

under NEM ranges from 32 cents/kWh to 53 cents/kWh.¹ 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.² 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.

Last year this body passed S.B. No. 1040, codified as Act 34, Session Laws of Hawaii 2013, which describes grid modernization as a broad concept that encompasses improving the technical functionality of the grid in a way that advances the increase of alternative customer energy options and the overall reliability, resiliency, flexibility, and efficiency of the Hawaii Electric System. The Commission views the ability to interconnect customer-sited generation and increased customer energy options as a result of a robust, well-functioning grid, not the means to achieve a modernized electric system.

The Commission is committed to taking actions that further the State's clean energy policy goals through the use of an increasing and diverse portfolio of cost-effective renewable energy resources, including distributed generation. Several examples of recent and pending Commission proceedings and decisions in support of Hawaii's clean energy goals include:

- MECO Rate Case and Wind Curtailment – The Commission's decision making in the course of Maui Electric Company, Ltd.'s most recent rate case in Docket No. 2011-0092 regarding curtailment of renewable energy on the Island of Maui has

¹A copy of this report can be found on the Commission's website at: <http://puc.hawaii.gov/reports/energy-reports/>.

² The 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/>.

resulted in a better understanding and the identification of utility actions to be taken to increase the use of lower cost renewable energy that had been previously curtailed or wasted.

- Decoupling Review – A review of the Hawaiian Electric Companies' decoupling mechanism by the Commission under Docket No. 2013-0141 was initiated in 2013 and is ongoing.
- Development of On-bill Financing and Green Energy Market Securitization – The Commission continues to work with various stakeholders on the development and subsequent implementation of a Hawaii On-bill Financing ("OBF") Program and Green Energy Market Securitization ("GEMS") Program. Both programs are intended to increase access to renewable energy technology – including customer-sited generation technology – for various segments of the population that have not traditionally had the ability or means to acquire such technology. These "hard-to-reach" segments include renters and other residents lacking access to traditional capital or financing sources. The launch of the OBF Program, as well as the filing of applications for the GEMS Program, are planned for the first quarter of 2014.
- Electric System Reliability – The Commission's decision on the work of the Reliability Standards Working Group ("RSWG") [Docket No. 2011-0206] is anticipated in the near future. In addition, the Commission is currently considering necessary reliability functions and processes associated with the work of the RSWG and the overall reliable operation of the Hawaii Electric System, such as the development of the Hawaii Electricity Reliability Administrator authorized under Act 166, Session Laws of Hawaii 2012.
- Principal Issues and Guidance in Integrated Resource Planning – While pending final review and decision by the Commission, the consolidated integrated resource planning process for the Hawaiian Electric Companies under Commission Docket No. 2012-0036 ("2013 IRP") was designed to have the different investor-owned utility companies address a host of essential principal issues concerning the future state of the electricity service market in Hawaii. A Commission decision for the 2013 IRP Proceeding is also anticipated to be issued in the near term, and will provide further regulatory guidance on issues relevant to the items raised in this measure.

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 that addresses those issues appropriately identified by the Legislature.

Specific Concerns

The Commission has strong concerns with the provisions of S.B. No. 2656 that create a right to interconnect to the grid, specifically those provisions that would:

- “[E]nsure any person, business, or entity can make a safe and reliable interconnection on the Hawaii electric system in a timely manner and for a reasonable cost; provided that the person, business, or entity is located on the Hawaii electric system” [page 6, line 7 to line 13],
- “[E]nsure that any person, business, or entity can operate customer generation regardless” of the site of generation [page 7, lines 11 to 14].

There are a number of potentially unintended consequences that could occur as a result of creating such a right in statute. Section 1 of this bill indicates that strict cost causation principles “prevent all Hawaii residents from accessing the Hawaii electric system for a reasonable cost,” but the measure does not indicate a more fair method of cost allocation to be applied or the avoidance of remaining system costs that are then covered by other non-self-generating customers.

Further, it is unclear from the bill’s language whether there would be the potential for conflicting agency oversight or whether the Commission would be given influence or authority for overseeing regulatory areas (e.g., permitting) that are appropriately handled by other governmental entities. Stated differently, is this bill intended to require the Commission to ensure that other entities with jurisdiction over such matters as siting and environmental concerns agree to an interconnection regardless of whether other laws or regulations would prevent the interconnection? The practical effects of making the Commission responsible for ensuring grid interconnections and customer generation operations are not clearly explained in this measure.

Oversight of technical and economic issues that directly affect electric utility system operations are within the purview of the Commission, and the Legislature reaffirmed this structure with the passage of Act 166, Session Laws of Hawaii 2012, which authorized the Commission to handle the development, adoption, and enforcement of electric system reliability standards and associated rules. The Legislature provided the Commission with further guidance via Act 37, Session Laws of Hawaii 2013, regarding actions and approved mechanisms "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 prescriptive provisions of S.B. No. 2656 make it unclear and potentially confusing to the Commission what the Legislature's intention and approach are for developing a modern, responsive Hawaii Electric System, and this may have the potential of kicking disputes over reasonable interconnection costs to the courts for resolution.

Alternative Solutions

The Commission recognizes the frustration that has been caused by the Hawaiian Electric Companies' inability to review and accommodate net energy metering applications in a timely manner due to the exponential growth of customer-sited installations. However, the various technical, economic, fairness, and equity issues cannot be overlooked. Rather than focus on the narrower issues of interconnection and customer generation rights, the Commission would offer 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.

The electric utility model evolved pursuant to what is known as the traditional regulatory compact. Under this arrangement, electric utilities are provided the opportunity to earn a reasonable return on capital in exchange for a taking on the obligation to commit the necessary capital to serve all comers. The customers purchased all or a major portion of their electricity needs directly from the utilities. Today, the proliferation of distributed generation, independent power producers, and other advancements in the energy sector have led to a far more complicated electric system. While the majority of customers remain completely reliant on the electric utilities for electrical service, a growing number of customers are capable of generating their own electricity. The

traditional regulatory compact does not encapsulate the range of relationships that today's electric system incorporates. In light of the changing landscape and complexity of the modern electric system, the Commission believes that a review of the fundamental electric utility-customer relationship is warranted.

Thank you for the opportunity to testify on this measure.



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

NEIL ABERCROMBIE
GOVERNOR

RICHARD C. LIM
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Statement of
RICHARD C. LIM
Director
Department of Business, Economic Development, and Tourism
before the
SENATE COMMITTEE ON ENERGY AND ENVIRONMENT
and
SENATE COMMITTEE ON COMMERCE AND CONSUMER PROTECTION

Tuesday, February 4, 2014
2:45 p.m.
State Capitol, Conference Room 225

in consideration of
SB 2656
RELATING TO THE MODERNIZATION OF THE HAWAII ELECTRIC SYSTEM.

Chairs Gabbard and Baker; Vice Chairs Ruderman and Taniguchi; and Members of the Committees.

The Department of Business, Economic Development, and Tourism (DBEDT) respectfully offers comments on SB 2656, 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 SB 2656.



NEIL ABERCROMBIE
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SHAN S. TSUTSUI
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DEPUTY DIRECTOR

TO THE SENATE COMMITTEES ON
ENERGY AND ENVIRONMENT
AND COMMERCE AND CONSUMER PROTECTION

THE TWENTY-SEVENTH LEGISLATURE
REGULAR SESSION OF 2014

TUESDAY, FEBRUARY 4, 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 MIKE GABBARD AND THE HONORABLE
ROSALYN H. BAKER, CHAIRS, AND MEMBERS OF THE COMMITTEES

SENATE BILL NO. 2656 - 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.

Senate Bill No. 2656
Senate Committee on Energy and Environment
Senate Committee on Commerce and Consumer Protection
Tuesday, February 4, 2014, 2:45 p.m.
Page 2

COMMENTS:

The Consumer Advocate is aware of the number of technical issues that are arising due to the current state of the electric grids on Hawaii's 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.

Thank you for this opportunity to testify.



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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 RELATING TO
MODERNIZATION OF THE HAWAII ELECTRIC SYSTEM**

**Before the
SENATE COMMITTEE ON ENERGY AND ENVIRONMENT and
SENATE COMMITTEE ON COMMERCE AND CONSUMER PROTECTION**

February 4, 2014 2:45 p.m.

Good afternoon, Chair Gabbard, Chair Baker, Vice-Chair Ruderman, Vice-Chair Taniguchi and members of the Committees.

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.

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 because the PUC proceeding required by SB 2656 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 allowing me to testify.

SB2656

Submitted on: 1/30/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Graham Ellis	President of Hawaii Sustainable Community Alliance	Support	No

Comments: My family and I have lived on solar power since 1987, it is a wonderful renewable way to provide power. I strongly support giving people the right to solar. Since 2009, the average residential rate have gone up by more than 50%! People should have the ability to pursue cleaner and cheaper options.



LEAGUE OF
WOMEN VOTERS*

League of Women Voters of Hawaii

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COMMITTEE ON ENERGY AND THE ENVIRONMENT

Senator Mike Gabbard, Chair

Senator Russell E. Ruderman, Vice Chair

COMMITTEE ON COMMERCE AND CONSUMER PROTECTION

Senator Rosalyn E. Baker, Chair

Senator Brian T. Taniguchi, Vice Chair

Tuesday, February 4, 2014, 2:45 P.M.

SB2656 RELATING TO THE MODERNIZATION OF THE HAWAII ELECTRIC SYSTEM

TESTIMONY

Nancy Davlantes, Legislative Committee Member, League of Women Voters of Hawaii

Chairs Gabbard and Baker, Vice-Chairs Ruderman and Taniguchi and Committee Members:

The League of Women Voters of Hawaii supports SB2656 which would 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. It would also 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.

The League has long supported actions to promote energy conservation and research into alternate energy resources available in Hawaii, taking into consideration environmental effect, economic feasibility, and differing conditions on each island.

While it was gratifying to read that Hawaiian Electric Co. is preparing to issue revised guidelines that will allow more PV systems to be installed in areas on Oahu already saturated with solar panels if the systems meet certain technical specifications, the anticipated continued growth of solar energy in Hawaii demands that the grid be modernized throughout the state so that any individual or business wanting to pursue cleaner and cheaper energy options can do so safely and reliably.

We urge you to pass this bill and thank you for the opportunity to submit testimony.



2/4/2014

Senate Committee on Energy and Environment
Senate Committee on Commerce and
Consumer Protection

ENE/CPN

2:45 p.m.

TESTIMONY IN SUPPORT

SB 2656

Chair Gabbard, Chair Baker, Vice Chair Ruderman, Vice Chair Taniguchi, and Members of the Committees:

Hawaii PV Coalition is pleased to submit testimony in **strong support** of SB 2656.

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.

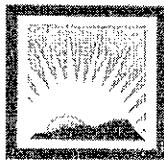
SB 2656 will help solve this problem by initiating a grid modernization planning process. With a more modern grid, Hawaiian Electric will be able to deliver more stable power, with a higher renewable content to its customers, while at the same time allowing more Hawaii residents to install photovoltaic 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.

For these reasons, the Hawaii PV Coalition strongly supports SB 2656 and urge you to pass it as drafted. 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 Senate Committee on Energy and Environment and Senate Committee on Commerce and Consumer Protection

Tuesday, February 4, 2014, 2:45 p.m., Room 225

SB 2656: Relating to the Modernization of the Hawaii Electrical System

Aloha Chair Gabbard, Chair Baker, and members of the Committees,

On behalf of the Hawaii Solar Energy Association (HSEA), I would like to testify in **strong support** for SB 2656, 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 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 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



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COMMITTEE ON ENERGY AND ENVIRONMENT

Senator Mike Gabbard, Chair
Senator Russell E. Ruderman, Vice Chair

COMMITTEE ON COMMERCE AND CONSUMER PROTECTION

Senator Rosalyn H. Baker, Chair
Senator Brian T. Taniguchi, Vice Chair

DATE: Tuesday, February 04, 2014

TIME: 2:45 p.m.

PLACE: Conference Room 225

Re: SB 2656 GRID MODERNIZATION

COMMENTS

Aloha Chairs Gabbard and Baker, Vice Chairs Ruderman and Taniguchi, and Members of the Committees

Life of the Land is Hawai`i's own energy, environmental and community action group advocating for the people and `aina for four decades. Our mission is to preserve and protect the life of the land through sound energy and land use policies and to promote open government through research, education, advocacy and, when necessary, litigation.

Life of the Land firmly believes that there are multiple paths forward and they need to be evaluated using cost/benefit analysis. Any rate increase should be fair in its application to different customer classes.

There are two groups of customers, the 8% with rooftop solar and the 92% without rooftop solar. Currently a customer who wants to join the 8% must pay for any grid upgrades needed.

There are three alternative methods of charging customers for the upgrades

- * All taxpayer should pay for the upgrades
- * The 8% should pay for the upgrades
- * All ratepayers should pay for the upgrades.

The first two approaches would see those who are economically better off paying a greater share of the costs.

The third approach would result in a net decrease in the electric bills of those installing solar while the 92% without solar would not need the grid to be upgraded but would see their bills rise.

The proposed legislation asks the PUC to consider “*the establishment of differentiated authorized rates of return on common equity are warranted to encourage increased utility investments in transmission, distribution infrastructure, and advanced grid modernization technology.*”

That is, should ratepayer funds be used to reward the utility for using ratepayer funds to upgrade the electric grid?

Absent from the bill is any mention of the desire to find the least cost or lower cost solution, to adopt any cost containment method or to increase the level of reliability.

Mahalo

Henry Curtis
Executive Director



SENATE COMMITTEES ON ENERGY & ENVIRONMENT
AND COMMERCE & CONSUMER PROTECTION

February 4, 2014

RE: SB 2656 relating to the modernization of the Hawaii electric system

Chairs Gabbard and Baker, and Members of the Committee:

The Alliance for Solar Choice (TASC) appreciates the opportunity to provide testimony in strong support of SB 2656.

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.

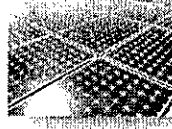
The rooftop solar market in Hawaii has been driven by the desire of citizens to assert control over their electric bill. TASC was formed on the belief that everyone should have the right to power their homes rooftop solar. This basic right – though strongly supported by Hawaii residents – is at risk 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 SB 2656 because it acknowledges that this type of consumer choice is in the public interest. Without pre-determining the outcome, SB 2656 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 SB 2656. 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,

Executive Director



SENATE COMMITTEE ON ENERGY AND ENVIRONMENT
SENATE COMMITTEE ON COMMERCE AND CONSUMER PROTECTION

February 4, 2014, 2:45 P.M.
Room 225

(Testimony is 2 pages long)

TESTIMONY IN STRONG SUPPORT OF SB 2656

Chairs Gabbard and Baker and members of the committees:

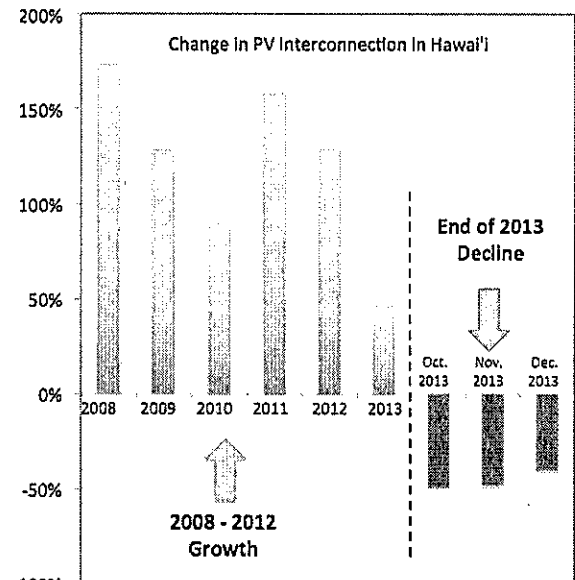
Blue Planet Foundation strongly supports SB 2656, helping to create a robust electrical grid that can connect clean and affordable energy to Hawai'i's citizens and ratepayers. SB 2656 will help to ensure that everyone can have access to such a grid, in a timely and reasonable manner. The bill directs 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



HECO grid, 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.

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.

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

2. Senate Bill 2656 Can Help Ensure E quality for All Ratepayers.

Senate Bill 2656 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.

Senate Bill 2656 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. Senate Bill 2656 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.

SB 2656 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.



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
SENATE COMMITTEES ON ENERGY AND ENVIRONMENT AND
COMMERCE AND CONSUMER PROTECTION

SB 2656, RELATING TO GRID MODERNIZATION

February 4, 2014

Chairs Gabbard and Baker, Vice-Chairs Ruderman and Taniguchi, and members of the Committees, 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 SB 2656 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 and utility-scale renewables to the greatest extent possible if we are to meet our current RPS of 40%, much less 70% or 100%. 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. 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.



EARTHJUSTICE

ALASKA CALIFORNIA FLORIDA MID-PACIFIC NORTHEAST NORTHERN ROCKIES
NORTHWEST ROCKY MOUNTAIN WASHINGTON, DC INTERNATIONAL

**SENATE COMMITTEE ON ENERGY & ENVIRONMENT
ATTN: CHAIR MIKE GABBARD & VICE-CHAIR RUSSELL E. RUDERMAN
SENATE COMMITTEE ON COMMERCE & CONSUMER PROTECTION
ATTN: CHAIR ROSALYN H. BAKER & VICE-CHAIR BRIAN T. TANIGUCHI**

**TESTIMONY RE: SENATE BILL 2656, RELATING TO THE
MODERNIZATION OF THE HAWAII ELECTRIC SYSTEM
FEBRUARY 04, 2014, 2:45 P.M., CONFERENCE ROOM 225**

Aloha Chairs Gabbard and Baker, Vice-Chairs Ruderman and Taniguchi, and Members of the Committees:

Earthjustice supports Senate Bill No. 2656 (SB 2656). We have worked extensively to facilitate the interconnection of customer-installed solar systems to the electric grid and have first-hand familiarity with the issues this bill addresses. In short, SB 2656 provides essential policy and funding support for further continued customer adoption of solar energy in a safe and reliable manner and at a reasonable cost.

The bill's preamble contains an excellent summary of the problem: we need timely solutions and planning to enable customer-generated solar, which has overwhelming public support and holds a key to a clean energy future in Hawai'i, but currently faces barriers from the Hawaiian Electric utilities (HECO). In fact, in various regulatory proceedings in which Earthjustice has participated, HECO has repeatedly recognized this need to implement timely solutions and move toward a modern, clean grid fully incorporating customer generation. Nonetheless, for many months, HECO has held up customer installations, with severe impacts on customers and local businesses.

SB 2656 is a modest measure that articulates the legislature's basic policy support for customer generation, allows the Public Utilities Commission (PUC) to develop the details, and provides funding to make it happen. Such support from the legislature is necessary to address the ongoing difficulties for customers to go solar. Contrary to claims in opposition that SB 2656 "predetermines" an outcome, the bill will ensure that customer generation enjoys the utilities' and regulators' due consideration and support on a level playing field.

The legislature has made clear its support for customer generation in passing Senate Concurrent Resolution No. 28 last year, which recognized the work and recommendations of the PUC-convened Reliability Standards Working Group and called for an update on this progress. HECO's recent de facto moratorium highlights that we now need more than a resolution. SB 2656 provides the necessary direction and support so that we can begin building a cleaner, more customer-centric grid of the future.

Mahalo nui for this opportunity to testify. Please do not hesitate to contact us with any questions or for further information.

Isaac H. Moriwake, Attorney, Earthjustice

The Pacific Resource
PARTNERSHIP



Testimony of Cindy McMillan
The Pacific Resource Partnership

Senate Committee on Energy and Environment
Senator Mike Gabbard, Chair
Senator Russell E. Ruderman, Vice Chair

Senate Committee on Commerce and Consumer Protection
Senator Rosalyn H. Baker, Chair
Senator Brian T. Taniguchi, Vice Chair

SB 2656 - RELATING TO THE MODERNIZATION OF THE HAWAII ELECTRIC SYSTEM
Tuesday, February 4, 2014
2:45 PM
Conference Room 225

Dear Chairs Gabbard and Baker, Vice Chairs Ruderman and Taniguchi, and members of the committees,

The Pacific Resource Partnership (PRP) is a labor-management consortium representing over 240 signatory contractors and the Hawaii Regional Council of Carpenters.

PRP **strongly supports** SB 2656, Relating to the Modernization of the Hawaii Electric System, which 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.. This measure will also 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.

Thousands of Hawaii residents have taken a step forward toward clean energy and installed renewable power at their homes and/or businesses. This is great news on a number of fronts: it helps make better use of our natural resources so we can meet our state's energy goals, creates thousands of sustainable jobs for the construction industry, and lowers utility costs for individuals who have installed solar rooftop panels or other renewable energy systems.

However, this progress has bumped up against technical limitations that need to be resolved. Because Hawaii is the first state to reach such high levels of renewable energy installation, we are blazing the trail with regard to renewable interconnection with the grid. And it is a grid that was created long ago

February 4, 2014

Testimony supporting SB 2656 -- Relating to the Modernization of the Hawaii Electric System

Page 2

when renewable energy was not even contemplated. We also know there are financial challenges to incorporating more renewable energy like solar into the electrical grid.

Both increased renewable energy interconnection and a strong and healthy utility are in the public's best interest. This measure directs the utility and the Public Utilities Commission to resolve the technical and economic issues that limit our state's ability to make the most of our abundant energy resources.

In September 2013, PRP conducted a public opinion poll about solar power. The results were emphatic: 96 percent of voters support getting energy from solar power. This poll shows an extremely strong public will to overcome the challenges and forge policies that will reduce our dependence on dirty imported fuels.

We respectfully ask for your support on SB 2656. Thank you for the opportunity to share our views on this important initiative with you.



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

MALAMA I KA HONUA
Cherish the Earth

SENATE COMMITTEE ON ENERGY & ENVIRONMENT
SENATE COMMITTEE ON COMMERCE AND CONSUMER PROTECTION

February 4, 2014, 2:45 P.M.
(*Testimony is 2 pages long*)

TESTIMONY IN SUPPORT OF SB 2656

Aloha Chair Gabbard, Chair Baker, and Members of the Committees:

The Sierra Club, Hawaii Chapter, with over 12,000 dues paying members and supporters statewide, *strongly supports* SB 2656. 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.

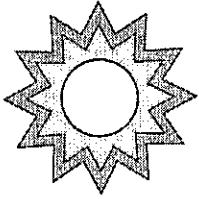
IV. PUC Has Discretion to Address Broader Technical and Economic Issues

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.

Mahalo for the opportunity to testify.

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-Transmitta-Letter.pdf



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Testimony of Inter-Island Solar Supply
In Support of SB 2656
Before the Joint Senate Committees on Energy and Environment
and Commerce and Consumer Protection
Tuesday, February 4, 2014

Chairs Gabbard and Baker, Vice-Chairs Ruderman and Taniguchi and members of the Committees, my name is Richard Reed and I am the president of Inter-Island Solar Supply. SB 2656 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 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 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.

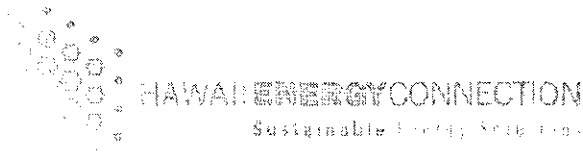
There are some that argue that they receive no direct personal benefit from DG because they live in a high-rise and DG only benefits those that live in single family or low-rise multi-family housing. With the adoption of community based solar (SB 2934) this argument, while specious, becomes irrelevant.

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 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.



Date: February 1, 2014

From: Hawaii Energy Connection

Re: **Support for SB 2656** Relating to the modernization of the Hawaii Electric System.

I represent Hawaii Energy Connection. We are a Hawaii based photovoltaic installation company that has been in the solar industry since 2007. For the first time in our companies history, we had to reduce our staff and cut back on our local expansion plans. With the abundant sunshine and high utility rates, that is a sad statement from a renewable energy company in Hawaii.

There is a growing number of consumers patiently waiting for utility interconnection approvals to get relief from rising monthly utility bills. These consumers are looking to the solar industry and their State Representatives for solutions, but those solutions are quickly being taken out of our control. Hawaii residents should have the ability to pursue cleaner and cheaper options by allowing the PUC to chart a way forward on grid modernization.

The legislature has worked very hard on providing a path to clean and affordable energy as an alternative to the rising utility costs that are imposed on the residences of Hawaii. It is all for nothing if the current grid can not support the State's renewable energy goals.

Hawaii Energy Connection **supports** SB 2656 relating to the modernization of the Hawaii Electric System.

Mahalo,
Chris DeBone
Managing Partner
Hawaii Energy Connection, LLC

Hawaii Energy Connection, LLC
99-1350 Koaha Place
Aiea, HI 96701
(808) 524-7336

SENATE COMMITTEE ON ENERGY AND ENVIRONMENT
SENATE COMMITTEE ON COMMERCE AND CONSUMER PROTECTION
February 4, 2014 — 2:45 p.m. — Room 225

Testimony in Support of SB 2656

Chair Gabbard, Chair Baker, Vice Chair Ruderman, Vice Chair Taniguchi, and Members of the Committees:

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

For these reasons, we **strongly support** SB 2656 and urge you to pass it as drafted. Thank you for the opportunity to provide this testimony.

Sincerely,

Colin Yost
Principal & General Counsel



TESTIMONY SUPPORTING SB 2656

To: Honorable Mike Gabbard, Chair, Senate Committee on Energy and Environment, and Honorable Rosalyn Baker, Chair, Senate Committee on Commerce and Consumer Protection.

From: SolarCity

Hearing on Feb. 4, 2014, at 2:45 p.m., Room 225

Aloha Chairs Gabbard and Baker, and Members of the Committees:

Thank you for the opportunity to provide testimony supporting S.B. 2656, 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.

S.B. 2656 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 S.B. 2656.

Mahalo,

Jon Yoshimura, Director of Policy & Electricity Markets, SolarCity Hawaii

SUNRUN



Sunrun Inc. | 1.855.4SUNRUN | sunrunhome.com

**SENATE COMMITTEES ON ENERGY & ENVIRONMENT
AND COMMERCE & CONSUMER PROTECTION**

Tuesday, February 4, 2014

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

Sarah Bertram, Director, Public Policy, Sunrun

Chairs Gabbard and Baker, and Members of the Committee:

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

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 SB 2656 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 SB 2656 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.

SB 2656 addresses this challenge by calling for a grid modernization planning process. Importantly, SB 2656 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

**TESTIMONY BEFORE THE SENATE COMMITTEES ON
ENERGY AND ENVIRONMENT AND
COMMERCE AND CONSUMER PROTECTION**

S.B. No. 2656

RELATING TO THE MODERNIZATION OF THE HAWAII ELECTRIC SYSTEM

February 4, 2014

2:45 pm

State Capitol, Conference Room 225

Scott Seu

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

Chair Gabbard, Chair Baker, 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 SB 2656 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 person, business, or entity can make a safe and reliable interconnection on the Hawaii electric system in a timely manner and for a reasonable cost regardless of where that person, business, or entity 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.

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 benefit all our customers with lower prices, not just a subset, and we believe that a diversified renewable energy portfolio is in the best interests of the people of Hawaii.

Again, we support the intent of SB 2656 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 you chose 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 Committees amend SB 2656 as such.

Thank you for this opportunity to testify.

SB2656

Submitted on: 2/3/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
David Yoshida	Hawaii Health Services, Inc.	Support	No

SB 2656

Dear Members of the Joint Senate Committee,

My name is Gerald H Yuh. I am the former Business Manager / Financial Secretary of the International Brotherhood of Electrical Workers that represented over 3000 electrical workers and over 200 signatory contractors in Hawaii.

Today, I am the owner of Capital Electric and Energy Solutions representing dozens of clients adversely affected by what's happening within the pv industry. I bring to this committee over 30 years of electrical and solar energy experience and hope to clarify several of the key issues plaguing the solar and pv industry.

At the top of what should be this committees focus is the general public who are the true victims of policy changes by the utility. When members of the PUC are lobbied by the utility for changes, it is almost exclusively for rate increases or allowances that pose further burden on customers. PUC members, who have limited understanding of the physics of electricity, are often unable to distinguish truth from fiction and should exercise skepticism when being proposed policy changes that seem benign but in fact have a significant negative impact to the public. They should seek independent experts in the industry for guidance and validation of proposed changes by the utility. One such issue is in 2004, I had met with the engineers from Hawaiian Electric to discuss why a policy change concerning passing on the cost for construction outside of a customer's property was made relating to service upgrades. I argued that until then, the policy was that the customer was responsible for installing conduit up to the property line of the home and that work in the sidewalk was the responsibility of the utility as this was an easement given to the utility for that purpose. It was changed to the homeowner was now responsible (cost and liability) for construction outside his property line including breaking the sidewalk, trenching and uncovering high voltage lines, installing HECO concrete boxes and even road crossings. This cost and liability puts the public at unreasonable expense and risk.

The response was, "The PUC said OK to pass on that cost and not enough people are complaining so we will save that money and pass that expense to the public." The attitude was "too bad".

Cost for underground upgrades for homeowners can range between \$5000 and \$10,000 and up to \$30,000 or higher for road crossings.

The proposed bill will provide a vital and necessary process for the PUC to acquire pertinent information so their decision can be made competently for the best interest of the public. People often forget that Hawaiian Electric is a for-profit company and will exercise any allowances it can to serve its interests and the interests of its shareholders.

The PUC and the legislature are the voice of the people and only balance to the utility monopoly for which the public continues to bear the burden of an old business model that is slow to evolve. Over billing is far more prevalent than most people know about and should be looked into more closely by the PUC and the legislature. Excuses such as human error and estimated billing are simply unacceptable in today's technology.

As many as 2/3 of all my pv customers have experienced errors in billing following the installation of their pv systems.

Regarding Hawaiian Electrics interconnection study and claims of safety hazards relating to reverse flow of energy:

- I asked the Net Metering Department to clarify the claim that technicians are measuring the circuits. "What electrical value are you measuring? I.E. volts.....amps.....watts.....heat.....resistance?"

Answer: We don't know

- I asked, “What is the safety hazard for Hawaiian Electric personnel working on a circuit with reverse flow energy from pv installations.

Answer: We don't know

- I asked, “What incident or event has been documented on grid failure, circuit damage or injury to utility workers due to reverse flow energy of pv systems?”

Answer: We don't know of any.

Electrical Realities:

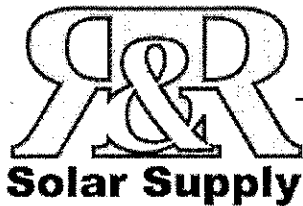
The majority of home in Hawaii is serviced by 100 to 200 amp electrical service. The allowable load rating for these values is 80 amp and 160 amps of load demand based on an 80% load ampacity factor per National Electrical Code. The danger is heat in conductors that increases with load being pulled off the grid. Reverse flow is not pulling load and therefore does not generate heat as is typical with regular flow.

The typical pv system is 24 to 36 panels and is protected by 2- 20 amp breakers. Each circuit provides approx. 12 -14 amps of reverse flow energy, that means less than 30 amps is being reversed at any given period of the day.....a far cry from the 80 -160 amp capacity of the average home system ability in Hawaii.

An argument could be made if the majority of systems are reverse flowing 100 – 200 amps or more per household as this would be in excess of the rating of their service conductor or equipment.....however, this is not the case.

With the announcement of allowing further installation of pv systems onto the grid where penetration has been deemed “Saturated” (15% of households on a circuit), it is not difficult to believe the utility has been less than completely honest with the PUC and the public concerning their reasons for preventing further approvals of interconnection.

Respectfully submitted,
Gerald H Yuh
Capital Electric and Energy Solutions, LLC
P.O. Box 25506 Honolulu, HI 96825



Before the Senate Committee on Energy and Environment & Senate Committee on
Commerce and Consumer Protection
Tuesday, February 4, 2014, 2:45 p.m., room 225
SB 2656: Relating to Energy

Aloha Chair Gabbard, Vice-Chair Ruderman, Chair Baker, Vice-Chair Taniguchi and
members of the Senate Committee on Energy and Environment,

My name is Rolf Christ and I'm the president of R & R Solar Supply.
I'm also a longtime member of the board of the Hawaii Solar Energy Association.

I'm testifying in strong support for this measure.

We all have to keep in mind, that keeping money circulating within the state, rather than
it being used to import oil, benefits all ratepayers and taxpayers alike for the life of a
solar system.

In addition solar installations create construction jobs and all related spending in our
community.

This bill is legislating and funding what has been long overdue.

We understand that the PUC has a full plate, but funding and outsourcing technical issues
should help.

We hope that the Hawaii Solar industry and maybe some inverter manufacturer's
technical personal can participate in a technical taskforce to help find solutions for
everybody involved, including our electric utility companies.

Other jurisdictions outside of the US have found solutions to increase grid saturation and
we should invite that expertise to the table.

Thank you for the opportunity to testify

Rolf Christ

President and CEO

Aloha,

I design and sell solar systems, and it is becoming increasingly difficult to bring this nearly perfect energy solution to customers. I have many customers who desire this renewable energy solution that are stuck on hold indefinitely. It seems like serious attention should be paid to provide equal and continuing access to everyone on the Hawaiian islands. Let's stop making our electricity from burning petroleum and make clean abundant energy from the sun. Our future will be cleaner and brighter for the water and the aina!

Mahalo,

Mark Morphey
Islandwide Solar

- I support giving people the right to own Photovoltaic energy systems. Since 2009, the average residential rates for electric have gone up by more than 50%! People should have the ability to pursue cleaner and cheaper options.
- Solar has been a major, sustainable economic engine for Hawaii. As of 2012, it accounted for 28% of all construction expenditures in the state.
- HECO has repeatedly failed to demonstrate a plan for growth of innovative technologies. The PUC needs to chart a way forward on grid modernization that is fair and efficient for everyone.

Please help Hawaii to grow in this way. If we can harness the energy from the sun and we can purchase a system to turn that energy into usable energy... why should we be blocked from using it? Please help!

Aloha,

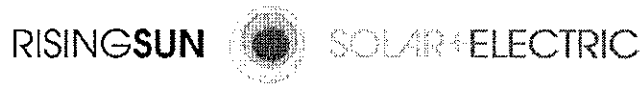
Shari Hooks (RA)

Lana'i Realty

808-721-1600 cell

815-572-9675 fax

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SENATE COMMITTEE ON ENERGY & ENVIRONMENT
SENATE COMMITTEE ON COMMERCE AND CONSUMER PROTECTION

February 4, 2014, 2:45 P.M.

TESTIMONY IN SUPPORT OF SB 2656

(Testimony is 2 pages long)

Aloha Chair Gabbard, Chair Baker, and Members of the Committees:

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. We 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 the '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 was 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,

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www.risingsunsolar.com

which was formed by the Independent Facilitator during the middle of the docket at the PUC's 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.


SB2656 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 SB2656 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 SB2656 and urge you to pass it as drafted. Thank you for the opportunity to provide this testimony.

Sincerely,

Bradley Albert

SB 2655 

Hawaiian Electric and the Common Grid system

I am a resident of Manoa, and I support residential solar power in my neighborhood. The benefits that solar allows the neighborhood to be "Green". Residential solar arrays are fairly small, yet they can make a big difference. Not only can they drastically reduce electrical loads for the house, but they also give us homeowners a way to reduce our greenhouse gas footprints, take a positive environmental action and leave the world a better place for our kids and grandkids. I cannot understand why it is so difficult for Hawaii Electric to add our solar system to the Common grid system. It also seems strange that Hawaiian Electric has not upgraded the electrical grid years ago when the State announced the future of going "green". It seems that Hawaiian Electric has not been doing a very good job on investment to maintaining the grid (Example: Research on advanced grid modernization technology). Instead customers will have to pay for the upgrades. Customers have already paid for their own solar system. Now we are expected to pay for the upgrades.

Hawaii wants to be known as the most sustainable city in the world. Let homeowners who want to help and provide "green" technology with out extra cost.

Sincerely,

Brian Low
2826 Poelua St.
Honolulu, HI 96822

SB 2656

I support the need of solar for all people in Hawaii. This utility monopoly has to stop. These rates of electric is by far out of control. As far as not enough grid to handle more solar power, it's not fair for people without solar to pay for lost revenue from people with solar. How is it that Heco wants to make up lost revenue for something they promote like saving cost on electric when they'll just increase the cost of electric for people without solar. This is nothing more than greed at its finest. I was told former gov lingle lifted the cap on electric, her way of thanking Heco for campaign contributions, so I'm sure gov Abercrombie is aware of this and wants part of the action as well. Government to me is ALWAYS about the money, generating revenue, but at the cost from the people in Hawaii, who suffers from government decisions. Now the governer has two terms, so we can expect he'll do for himself than for the people of Hawaii. For me though, I can't put up anymore of this politics the government been doing, so my family decided to move to Las Vegas. Cost of living there is like when I was a kid, affordable with REAL politicians that take care of the people. Now, it's a big change. My thoughts to this monopoly is the people is not living Hawaii, the politicians get paid to live Hawaii, while the people of Hawaii suffers more and more. Now for sewage rates..... Now that's a whole nother problem for the people now ain't it. When will we EVER get to live happy.

Mike Murphy

Talking points:

- I support giving people the right to solar. Since 2009, the average residential rate have gone up by more than 50%! People should have the ability to pursue cleaner and cheaper options.
- Solar has been a major, sustainable economic engine for Hawaii. As of 2012, it accounted for 28% of all construction expenditures in the state.
- HECO has repeatedly failed to demonstrate a plan for growth of innovative technologies. The PUC needs to chart a way forward on grid modernization that is fair and efficient for everyone.
- Provide your own perspective: why do you care about rooftop solar?

. Christina Litman

Aloha!

Please pass SB 2656.

We need to allow citizens of Hawai'i to find every reasonable and safe way to reduce their electric bill and our dependence on imported oil.

HECO needs to be forced into the reality that continued increases in our electric bills are not economically possible for consumers. Unless we move towards solar and other more environmentally friendly energy resources our aina and Planet will suffer catastrophically. HECO and the PUC need to be encouraged and pushed by you to meet people and Planetary needs.

Mahalo nui loa!

In peace,

Tom DiGrazia & Family
808-262-0730

SB2656

Submitted on: 1/30/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Hardeep Kharbanda	Individual	Support	No

Comments: Hawaii has a golden opportunity to set an example by proactively promoting and supporting Solar Energy. Please pass this bill and give people the support to go green, boost the Hawaii solar industry, and move our energy infrastructure towards a modern, efficient future. Everybody wins with solar! If the electric companies think solar is bad for their business, they are mistaken. Don't let their bullying and lobbying get in the way of a common-sense step forward for the state of Hawaii.

SB 2656

My husband and I recently installed a rooftop photovoltaic system. We had applied to MECO in July 2013 and it took six months to get it approved. We think that is too long a wait for approval. Global Warming is a real problem. People in Hawaii should be encouraged to use alternative energy systems to lessen the amount of oil that needs to be imported from Indonesia to generate electricity.

Mary Sue Matthews

To Whom it May Concern

I SUPPORT SB 2656

Thank you for your consideration.

Ludwig Laab
Makawao, HI

SB2656

Submitted on: 1/30/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
William Navran	Individual	Support	No

Comments: Most of us need a financial break and solar can deliver that. Solar has been an important economic stimulus for the state. We need to support this bill.

The PUC has to get involved with solar power so it can be available to every HECO customer. We are being held captive by HECO for horrible electric bills. We all talk about clean energy and Hawaii has the most sunshine, but we are being refused to do what we can to be "green". Solar power has been around for years, but HECO seems to have ignored progress for the almighty dollar! We need help! We need HECO to improve the grid, if that's the real reason we are being denied solar power, and not charge the solar customers extra charges to get and use solar power.

Thanks, Mary Murphy

SB 2656

I support giving people the right to solar. Since 2009, the average residential rate have gone up by more than 50%! People should have the ability to pursue cleaner and cheaper options. Solar has been a major, sustainable economic engine for Hawaii. As of 2012, it accounted for 28% of all construction expenditures in the state. HECO has repeatedly failed to demonstrate a plan for growth of innovative technologies. The PUC needs to chart a way forward on grid modernization that is fair and efficient for everyone.

Aloha,

Stephen Ambagis
Resource Mapping Hawaii LLC
stephen@remaphawaii.com
ph: 808-756-5265
web: http://remaphawaii.com

Aloha Members of the Senate Committees on Energy and the Environment and Consumer Protection-

As a new home owner in Honolulu I would like to have the right to install a Photo Voltaic (PV) system in order to save money on the increasingly expensive HECO monthly bill now to pay. Residents of Hawaii should have the option to pursue cleaner cheaper options than plugging into the grid run by fossil fueled generators. HECO has repeatedly failed to demonstrate a plan for growth of the solar technologies. Solar has been a technology used in Hawaii for decades and HECO has not made any updates to the grid in order to accept power from solar units. I urge the Public Utilities Commission to update the infrastructure to allow for a more sustainable future for our islands energy needs.

Mahalo for your time and consideration of my testimony,
Stacey Fineran

Hi HECO,

I just want to add my voice to the many that I imagine you are hearing, asking that you please act quickly to enable all who want to go rooftop solar.

Aloha and mahalo, Alan

HECO has repeatedly failed to demonstrate a plan for growth of innovative technologies. The PUC needs to chart a way forward on grid modernization that is fair and efficient for everyone.
Anne Rice

Dear Sir/Madam,

Please pass SB 2656. HECO should not be allowed to hold Hawaii back from becoming energy efficient. The Governor of Hawaii and Mayors of each County keep saying they want Hawaii to move forward toward becoming energy efficient. What does HECO mean when they tell a customer that the customer cannot connect a PV system to the grid 'because HECO is saturated for that particular area'. Is this another way of saying, 'HECO doesn't want any more customers installing PV systems because HECO's profit margin will be impacted? If HECO is allowed to hold customers hostage and prevent them from becoming energy efficient, how can the Governor and the County Mayors tell Hawaii's people we need to become more energy efficient?

Hawaii's leaders who hold office are supposed to help Hawaii's residents, not work against their energy efficiency. Hawaii's leaders need to stand up and pass bills to protect Hawaii's residents from power monopolies like HECO. HECO has no right to hold Hawaii residents hostage for the purpose of lining HECO's pockets with greedy profits. Greedy is not a strong word when you consider how many millions of dollars are paid annually to HECO's CEO. That is money ripped from the people of Hawaii to fatten the wallets of HECO's hierarchy. ENOUGH WITH RIPPING OFF THE PEOPLE OF HAWAII – let Hawaii residents install PV systems.

Mahalo and Aloha,
Geraldine deBeer
debeer@maui.net

SB2656

Submitted on: 1/30/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
sherrian witt	Individual	Support	No

Comments: Families should have the right to have solar without any connection with Helco..

I want to testify to support SB2656
Ingrid Tillman

I would like to testify about SB2656. I have already obtained a federal loan for solar and am now being told that may not be possible. Why can't I have a choice about how I use energy in my own home. HELCO is my electric provider. I don't have a choice about that but I should have a choice about how I access that on my own property.

I support giving people the right to solar. Since 2009, the average residential rate have gone up by more than 50%! People should have the ability to pursue cleaner and cheaper options. I have cut back energy use as much as possible and often use no lights at all. I can not heat my mountain home at all because I can not afford the electric costs. I have to just wear more layers of clothes when the temperature drops down into the 50's. Burrrrrr. As a retired senior citizen, I can no longer afford electric for my home due to recent increases.

Solar has been a major, sustainable economic engine for Hawaii. As of 2012, it accounted for 28% of all construction expenditures in the state.

HECO has repeatedly failed to demonstrate a plan for growth of innovative technologies. The PUC needs to chart a way forward on grid modernization that is fair and efficient for everyone. When a monopoly controls utilities we all suffer.

Thank you for the opportunity to submit testimony on this matter. I hope you will consider what I have said and do what is right for the people of Hawaii.

Sincerely yours,
Cynthia Sallee-Brown
PO Box 82
Paauilo, HI 96776

SB2656

Submitted on: 1/30/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Pearl Deans	Individual	Support	No

Comments: I am a disabled 60-year old veteran. My Social Security Disability benefit is \$1080 per month. Every year my electric bill goes higher and higher. I pay more than 10% of my income to Heco. Every dollar I send to Heco subsidizes solar power for home owners who make a lot more money than I do. Frankly, I think SB2656 is vague and timid. Heco is a public utility. Heco should be forced to provide solar power for all of its customers. Why should I be paying more than \$100 per month to Heco in a state that gets sunshine almost every day of the month? Why should I be barred from solar power just because I'm too poor to own a home but lucky enough not to live in the projects?

Honorable Senators,

I am writing to urge your support for SB 2656, which ensures the right of homeowners to install solar electric systems on their homes.

Since 2009, residential electric rates in Hawaii have gone up by more than 50%, yet HECO has failed to demonstrate a plan for growth of innovative technologies, like rooftop solar PV, which can lower utility bills, insulate homeowners from rising fuel prices, and provide a measure of independence for residential electric customers.

Solar electric systems have been a major, sustainable, economic engine for Hawaii over the past decade. In 2012, it accounted for 28% of all construction expenditures in the state. For 2013, that figure will be severely limited by restrictions HECO has placed on solar PV installations - supposedly for technical reasons.

At the same time, HECO is proposing to add hundreds of megawatts of utility scale PV to their electric grid on Oahu. It seems incongruous that on one hand, they claim to be unable to accept any additional consumer owned PV on their circuits, but somehow those restrictions don't apply if the systems are owned, or controlled, by the utility.

It is time for the PUC to step in and chart a way forward on grid modernization that is fair and efficient for everyone. Safety and reliability of our electric grid are important to our community. Maximizing HECO's profit and their control over our electric generation are not. It is time for HECO to move into the twenty first century or to get out of the way and allow a public utility that serves the people of Hawaii, rather than a small group of investors, to make the changes that are needed to move our economy forward and end our reliance on costly and polluting fossil fuels.

Aloha, and thanks very much for your consideration,

Alan Ewell
4176 Round Top Drive
Honolulu, HI 96822
808.945.3853

SB2656

Submitted on: 1/30/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Wendy Arbeit	Individual	Support	No

Comments: I support everyone's right to install solar without being stopped by the HECO monopoly, which is more interested in its bottom line than an energy-sustainable Hawaii. Resist HECO's lobbyists, vote for this bill. Its better for our citizens and the environment.

SB2656

Submitted on: 1/30/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Michele Nihipali	Individual	Support	No

Comments: I support giving people the right to solar. Since 2009, the average residential rate have gone up by more than 50%! People should have the ability to pursue cleaner and cheaper options. Solar has been a major, sustainable economic engine for Hawaii. As of 2012, it accounted for 28% of all construction expenditures in the state. HECO has repeatedly failed to demonstrate a plan for growth of innovative technologies. The PUC needs to chart a way forward on grid modernization that is fair and efficient for everyone. Many of my friends cannot put solar on their homes because their area is "full" according to HECO. It's time that all Hawaii homeowners who want to reduce their dependence on imported oil can get solar.

Hello legislators,

Please support SB 2656 to give people the right to solar. It's a travesty when a single mom with cancer (Cynthia Cantero) can't get solar—while our state sorely needs clean, local-based energy. It's a terrible burden to citizens that rates have shot up over 50% just in the past five years. Solar is a job creator—counting for over one-quarter of all construction spending in the state two years ago. But HECO isn't seriously seeking innovation, so PUC needs to do so.

Mahalo,

Cory Harden, PO Box 10265, Hilo, Hawai'i 96721

People's lives are depending on this bill passing, and getting clean, cheaper, electricity.
Please read the story below and vote in support of SB 2656

- I support giving people the right to solar. Since 2009, the average residential rate have gone up by more than 50%! People should have the ability to pursue cleaner and cheaper options.
- Solar has been a major, sustainable economic engine for Hawaii. As of 2012, it accounted for 28% of all construction expenditures in the state.
- HECO has repeatedly failed to demonstrate a plan for growth of innovative technologies. The PUC needs to chart a way forward on grid modernization that is fair and efficient for everyone.
- And mainly because this story below is heart wrenching and this woman and her family deserve to be able to get clean cheap energy. The energy company, HECO, should be doing this for us, but if they keep refusing to, then they at least should not be able to stand in the way of people making it happen themselves!
- Especially a woman with cancer and 5 kids!

Sincerely
Leslie Wingate
Please take a minute to read the story below

Cynthia Cantero's Testimony:

My name is Cynthia Cantero and I live in Ewa Beach. I'm a customer of the utility and a customer of the solar industry. I have to live with the repercussions of HECO's negligence every day and I want to make it clear what the consequences of inaction are. This isn't just a policy discussion. People's lives are hanging in the balance. My life is hanging in the balance, and I want you to understand that.

I first looked into installing solar in June of last year. I interviewed five companies. I sat them down and I said I need you to guarantee me that this will be an easy, stress free process. I have five kids, I live on a single income and I've been battling cancer since 1998. I was due to start a treatment for complications from my cancer, but it depends on having a stress free environment. I wanted to install solar so that I could give a measure of security to my kids. I took out a loan and I signed the contract in August. HECO came out and changed our meter and told me I was ok to go ahead. Two or three weeks later I got a letter in the mail telling me that the grid was too saturated and I couldn't move forward with the installation. I don't understand why they didn't see this coming earlier?

I can't give that loan back. My loan payments are \$480 a month and I'm still paying my electric bill. I used to pay over \$500 a month, now it's down to \$300 or \$400 because I've stopped using air conditioning. Thank God it's been cool lately, but I don't know what I'll do when the temperature rises again. Because of the medication I'm on, my condition gets worse when I get hot.

But besides what I'm going through personally, what angers me the most is the impact this is having on my family. The one thing I've always promised my kids is that I would give them an

opportunity to get an education. My son has never worked more than 20 hours a week while he was in school. But this semester, I had to ask him to cut a class, and double his hours, because we need the extra income and if this doesn't get resolved, we will be facing foreclosure.

The longer that I wait to go on the treatment, the less chance I have of beating it. Every day that this doesn't get resolved might mean one less day I have to spend with my family.

I tried to do everything right. I did my homework. I didn't rush into anything. I had no reason to think that I would be stuck in this nightmare. And because you didn't do your job, I have to live with the consequences and I want you to live with those consequences too. Yesterday, I didn't see a light at the end of the tunnel. Today, if this bill passes, that will be my light at the end of the tunnel. We can't go back, we can't fix all the mistakes that were made. But we need a solution now. I need a solution. My family needs a solution and my life depends on it.

In support of SB 2656

I am a small farmer in Pahoia. My electric bill averages about \$350 per month for a 2 person household and for farm water pumps for aquaculture. It is difficult enough to make survive on farming income without having enormous electric bills each month. I have 10 large 225 watt solar panels ready for installation but was told that I should not even apply for solar hook up because HELCO was not accepting applications. Now what am I supposed to do with my solar panels which really has impacted my budget?
Sylvia Dolena
PO Box 986, Pahoia, HI 96778

SB2656

Submitted on: 1/30/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
William Leet	Individual	Comments Only	No

Comments: Helco has been focused on making money at the expense of its customers and the global environment. Most utility companies are offering incentives to install solar panels, yet Helco and HECO make it economically unsound for its customers to do so. President Obama, born in Hawaii, stressed in his State of the Union message that encouraging alternative energy sources should be a priority for our nation. Helco and HECO need to get on board with the needs of its customers and the needs of global health.

I support giving people the right to solar. Since 2009, the average residential rate have gone up by more than 50%! People should have the ability to pursue cleaner and cheaper options.

Its time lead the way vs. following the rest of the industrialize world.

Kirk Puuohau-Pummill
16-777 Milo St
Keaau HI. 96749

SB2656

Submitted on: 1/30/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Leslie Larsen	Individual	Support	No

Comments: SB2656 is an important step for Hawaii to take. Renewable energies are essential for our future - especially with the rising costs of nonrenewable energy sources. Solar panels on every home and business feeding our electric grids makes good sense. Please

support this.

Aloha Committee members:

I write in support of SB2656. Homeowners who install solar or PV are technically building the power company's infrastructure for them. Costing \$30k to \$40k for each home, means the power companies are not footing that infrastructure bill but they still benefit by delivering that energy product to consumers who pay the power company. Consumers are not paying the consumers who generate that solar electricity. Alternative energy has been part of Hawaii planning for many years. There is no excuse for the power companies not to be ready to deliver that energy they are getting from homeowners.

If the power companies cannot manage their delivery systems now, how can they possibly manage the \$2 billion under channel cables planned next? Homeowners need the assurance of the commission and the state that their investment in solar can be put to use immediately.

Respectfully,

Karen

Karen K. Cobeen
P.O. Box 7028
Kamuela, HI 96743
808-938-0089

Sign our petition to amend the Hawaii
State Constitution to allow for a
recall of public officers, legislators:
<http://signon.org/sign/hawaii-public-officers>

I am emailing to express my support of SB 2656.

Solar energy is the right choice for individuals to save money, it's the right choice for communities, and it is the right choice for our planet. We have a responsibility to our children and grandchildren, to do everything we can to eliminate the use of fossil fuels and reduce greenhouse gas emissions.

Hawaii is ideally suited for generating solar energy, with our generally sunny climate, and position near the equator (compared to much of the mainland US). We should be a solar energy LEADER. We should be innovating in the use of solar. Imagine what a wonderful thing that would be; something all our citizens could be proud of.

Thank you for your consideration.

Cheri Vasek
455o A Sierra Drive
Honolulu, HI 96816

SB2656

Submitted on: 1/30/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Barbara Borgnino	Individual	Support	No

Comments: Solar should me widely installed. We need to allow more people install solar

Aloha,

I am writing in support of SB2656. All households should have the right to install solar. The Public Utilities Commission should be given the resources to start grid modernization and to ensure access for all households.

I know that solar power is an efficient way to save natural resources and a way to help Hawaii's families save on utility costs.

Please help support every household in the way of obtaining solar; support SB2656.

Thank you,
Lauralee Baoy
3476 Kalihi St Apt B
Honolulu, HI 96819

SB2656

Submitted on: 1/30/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
tia pearson	Individual	Support	No

Comments: •I support giving people the right to solar. Since 2009, the average residential rate have gone up by more than 50%! People should have the ability to pursue cleaner and cheaper options. •Solar has been a major, sustainable economic engine for Hawaii. As of 2012, it accounted for 28% of all construction expenditures in the state. •HECO has repeatedly failed to demonstrate a plan for growth of innovative technologies. The PUC needs to chart a way forward on grid modernization that is fair and efficient for everyone. Since HECO has a monopoly, what are we suppose to do when we can't pay the very high electric bill?

SB2656

Submitted on: 1/31/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

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

Comments: I'm researching solar panel installation now, and don't want to get stuck with a loan and not have my installation approved due to lack of access to the Helco grid. Please vote to bring our electricity bills down! Thank you.

SB2656

Submitted on: 1/31/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Jamie Louis	Individual	Support	No

SB2656

Submitted on: 1/31/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Lisa Galloway, PhD	Individual	Support	No

Comments: I support giving people the right to solar. Since 2009, the average residential rate have gone up by more than 50%! People should have the ability to pursue cleaner and cheaper options. Solar has been a major, sustainable economic engine for Hawaii. As of 2012, it accounted for 28% of all construction expenditures in the state. HECO has repeatedly failed to demonstrate a plan for growth of innovative technologies. The PUC needs to chart a way forward on grid modernization that is fair and efficient for everyone.

SB2656

Submitted on: 1/31/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Joel Thompson	Individual	Support	No

Comments: In 2012, my wife and I installed a photovoltaic solar system on our house in Hilo. This is the best investment we have ever made. Solar energy makes so much sense for Hawaii, reducing energy costs for businesses and individuals, reducing our need to bring in fuel from out-of-state, and providing good-paying, clean-energy jobs for Hawaii's citizens. We must find a way to provide affordable solar energy to all those in Hawaii who desire it. Mahalo for your service and for your consideration of this important issue.

Greetings, Our entire ohana wishes to express our strong and sincere support for passage of SB 2656. The modernization of the electric grid in Hawaii is an extremely important element in our pursuit of sustainable outcomes for future denizens of our islands. Please note our support and pass this important bill. Thank you, John Grandinett

Please make solar Options for everyone! We dont want to be prisoners of big oil .We have the option of going green and saving money and the planet.Please support solar growth. Aloha Mike McNeace . I have solar and love it !

To whom it may concern,
I am a Hawaii resident who has been affected By HECO's supposed overcrowded grid system and not allowed to have the freedom to use photovoltaic.
I am testifying IN SUPPORT of SB 2656.
Mahalo,
Kimberly Meyer

SB2656

Submitted on: 1/31/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

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

Dear friends in government;

I am writing in support of the bill to allow ALL to connect to solar grid. It is no secret that we are junking our planet with fossil fuels (which is the alternative in Hawaii) and it is utterly senseless to limit the use of this renewable resource. I strongly object to any blocking to it, other than true danger. Could you please vote to make a little more sense here, and explain to me how this could be being blocked so.

Yours sincerely,

Ms. Rain

SB2656

Submitted on: 1/31/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Ido Kek	Individual	Support	No

Comments:

Residents of Hawai'i should be granted the legal right to choose if they wish to source their power from both rooftop or other Solar-powered setups *and* a company supplying electricity via grid access. Depending on the needs of a household, their income, other high-priority projects and unforeseen events, it can take a long time to transition to sole use of solar power to meet their needs. They shouldn't be screwed on their investment in the meantime. HECO should NOT have any authority to deny *anyone* electrical service *on the basis of whether or not they are using PV cells*. That's absolutely ridiculous.

You know all that talk about moving Hawai'i in a more sustainable direction? Time to put your money (or your votes) where your mouth is. People will be watching your actions here, and we WILL remember, come election time, if the choices you made were in our best interest or not.

SB2656

Submitted on: 1/31/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Mark Shaw	Individual	Support	No

SB2656

Submitted on: 1/29/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Ed Wagner	Individual	Oppose	No

Comments: ENE/CPN Committee Members, The attached document suggests that HECO has been lying to the PUC and Legislature for the past 5 years about how much renewable energy it can accept on its crumbling grid. I would suggest you bring in competent electrical engineers from the mainland to perform an audit of our electrical utility. The company is doing everything it can to stave off bankruptcy. Furthermore, the people have already paid for these upgrades through many years of surcharge after surcharge. What did the utility do with all that money ? Did the stockholders get it? Was the money given to Constance Lau as part of her \$5.8 million income last year? The only reason why the grid needs upgrade now is because of 50 plus years of incompetence, mismanagement, and neglect by the utility monopoly. If the grid is to be upgraded now, then stockholders of the company must pay for those upgrades, not the ratepayers. Starting this year, more and more residents will use battery backup to get off the grid, and eventually, our utility monopoly will be a thing of the past.

April, 2011

With the full backing of higher-ups at the US Dept. of Energy as well as others close to President Obama, Anthony Folsom will meet with Gov. Neil Abercrombie to "put pressure" on Hawaiian Electric Industries to loosen up the process for bigger solar projects and to raise the ceiling from 15 percent clean energy currently allowed to be fed back to the electric grid.

Advanced solar technology like concentrator photovoltaic (CPV) and high performance satellite solar cells married with mirrored optical engineering could stave off Hawaii's energy crisis relatively quickly - within a decade. Thus balancing long-term sustainability with the ever increasing demand for energy statewide. But, this 15% limit on clean power in Hawaii hampers such progress and appears a direct conflict with the State's mandate to generate 40 percent clean energy by 2030.

In an exclusive radio interview Tuesday, April 26 with government consultant, Anthony Folsom, he suggests the real problem in adopting high performance solar technology for generating more clean energy in Hawaii is the utility provider itself. Following is Folsom's statements...

The largest barrier to installing commercial solar systems in Hawaii is the overly stringent interconnection process. Because of HELCO's feeder cap requirements, it is difficult to identify locations that have demand, solar resource, and enough feeder capacity left for anyone to be able to site a system.

We understand that HELCO's feeder percentage caps are in place as insurance means to allow them to be able to provide safe and consistent power to the residence of Hawaii. It is necessary to have such checks in place, and we do not dispute that the goal of safe and consistent power is important.

We believe it is possible for HELCO to achieve these goals, without causing the uncertainty and delays that are prevalent now.

The way that HELCO assesses the effect of distributed energy on the grid is fundamentally flawed. They assert that adding distributed generation essentially doubles the use of their transmission system, and could possibly overload some grid feeders causing failures that would affect multiple customers. We believe this premise to be false because if you have a building with a 1000 amp service before distributed generation is installed, the feeders and service for that location are already sized to carry 1000 amps. Adding a solar system to that site that has the capability to generate 1000 amps will never subject the feeders or transmission system to 2000 amps. This is because only 2 electrical scenarios are possible.

The first scenario occurs during the evenings, or periods of bad weather. Under this scenario the site will continue to draw up to 1000 amps from HELCO's system, just as it always had. Under this scenario a site and HELCO's system behave as if the solar is not present because if there is no sun, the system does not produce power. The system does not consume power when there is no sun, so the site will never require more than 1000 amps.

The second scenario would be at solar noon on a clear cool day. At that point a solar system can get close to generating the 1000 amps it was designed to. That electricity the system is generating will go to serve any load demands on the site before it enters HELCO's system. If the system is producing more power than there is onsite demand for, the extra power will move back into HELCO's system. If the site is using no power at this point, and the solar system is producing it's maximum 1000 amps, that 1000 would be fed back into HELCO's system.

Under the first worse case scenario, there would be 1000 amps on HELCO's feeders. Under the second best case scenario a system would be feeding 1000 amps back into HELCO's feeders. At no point is it possible for a 1000 amp site to simultaneously draw and feed 1000 amps from/to HELCO's system. If a system is feeding HELCO 1000 amps, and a demand of 200 amps of load occurs at the site, all that happens is the system supplies that 200 amps to the load, and reduces the amount it is feeding to HELCO to 800 amps. It does not cause 1200 amps of power to run through HELCO's feeders.

Net-Metered PV systems should be primarily viewed as conservation systems by any utility, instead of generation systems.

There are other smaller issues that can occur with any distributed generation. Inductance on transformers, sharp peaks and dips, and the high variability of distributed generation are other concerns typically stated by HELCO. While there is some impact to the grid and it's management because of these issues, these impacts are minimal and already accounted for in HELCO's system.

The electrical profile of a site with large distributed energy production is virtually identical to a manufacturer facility that is constantly starting and stopping machinery that draws large loads. HELCO's system is able to supply large variable loads.

HELCO has used these falsely perceived risk to limit the quantity and location of distributed energy systems in their territory. They have implemented mandatory interconnection studies for large distributed energy systems. These studies take a very long time to complete, and are extremely expensive.

We recently verified that a commercial solar company was told by HELCO that if they wanted to install a system of over 30KW at a site, that they would have to wait a minimum of 6 months for a study. The amount for this study was quoted at a minimum of \$30,000. They were also told that after the study was complete that there would be no guarantee that their interconnection application would be approved.

They responded with a request to pay for and have the study completed by an independent HELCO approved engineering firm. Their intention was to be able to provide the information HELCO was seeking in a timelier manner, and after soliciting proposals from the engineering firms found they could have the same study done for a fraction of the cost HELCO was asking for.

I believe the following solutions would be reasonable to consider:

- Removing HELCO's 15% feeder cap.
- In the event that the cap cannot be removed, the cap should be raised to 50%.
- HELCO should not be able to demand mandatory studies on systems in their service territory for systems under 150KW.
- HELCO should not be able to demand an interconnection study without a clearly defined site specific cause.
- In the event a study is required, HELCO should not have a monopoly over the study process. A list of engineering firms should be established for those that wish to have an interconnection study done independently, and these independent studies should be accepted by HELCO.
- There should be a maximum allowable cap on the amounts of money HELCO can charge for studies they perform.
- There should be a minimum amount of time of approximately 8 weeks for HELCO to complete interconnection studies.

I believe greater transparency from HELCO and, a more thorough analysis of these issues would help The State of Hawaii achieve its environmental and energy goals. A lot of good green jobs can be created in Hawaii if these suggestions are considered.

Kind Regards, Anthony Folsom

Editor's note: to clarify, Folsom's intentions... "the intended meeting with the Governor is to see what can be done to change the current limits on solar generation. Yes, there is a lot of pressure, but I'm not here to force anyone to do anything. I'll research and report back to Washington D.C."

SB2656

Submitted on: 1/31/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Christine L. Andrews, J.D.	Individual	Support	No

Comments: I support giving people the right to solar. Since 2009, the average residential rate has gone up by more than 50%! People should have the ability to pursue cleaner and cheaper options. Solar has been a major, sustainable economic engine for Hawaii. As of 2012, it accounted for 28% of all construction expenditures in the state. HECO has repeatedly failed to demonstrate a plan for growth of innovative technologies. The PUC needs to chart a way forward on grid modernization that is fair and efficient for everyone.

SB2656

Submitted on: 1/31/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Karen Chun	Individual	Support	No

Dear Senate Committees on Energy and Environment and Consumer Protection,

I am writing in support of SB 2656, a bill that gives the PUC funding to start a grid modernization proceeding and establishes the policy that people should have the right to interconnect to the grid (unless there are safety or reliability concerns).

I support giving people the right to solar. Since 2009, the average residential rate have gone up by more than 50%! People should have the ability to pursue cleaner and cheaper options.

Solar has been a major, sustainable economic engine for Hawaii. As of 2012, it accounted for 28% of all construction expenditures in the state.

HECO has repeatedly failed to demonstrate a plan for growth of innovative technologies. The PUC needs to chart a way forward on grid modernization that is fair and efficient for everyone.

I urge you to support SB 2656.

Mahalo,

Julie Mitchell
PO Box 139
Kurtistown, HI 96760

SB2656

Submitted on: 1/31/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
janice palma-glenie	Individual	Support	No

Comments: Aloha, i have a very wealthy client who wants to install solar collectors on a huge, new house they're building. they were told they couldn't because they'd be producing too much power, too many people ahead of them, etc.. This is crazy. SB 2656 gives the PUC funding to start a grid modernization proceeding and establishes the policy that people should have the right to interconnect to the grid (unless there are safety or reliability concerns). I support giving people the right to solar. People should have the ability to pursue cleaner and cheaper options. In our state of sun, solar has been a major, sustainable economic engine for Hawaii. As of 2012, it accounted for 28% of all construction expenditures in the state. HECO has repeatedly failed to demonstrate a plan for growth of innovative technologies. The PUC needs to chart a way forward on grid modernization that is fair and efficient for everyone. Mahalo for supporting this reasonable bill to move our state toward energy independence.

Howard R. Conant

Senate Committee on
Energy and the Environment

Senators:

Mike Gabbard, Chair

Russell E. Ruderman, Vice Chair

Suzanne Chun Oakland

Sam Slom

Les Ihara Jr.

February 1, 2014

This testimony is in support of SB2656

Aloha Senators,

I am sending this testimony in favor of SB2656 to each of you as I think passage is crucial to the future of our state. Hawaii's electric companies and the PUC are on a collision course with technology and economic reality, and the outcome could be catastrophic.

In America, as a matter of policy, monopolies are tolerated and even encouraged for public electric (and other) utilities to ensure the costs of providing power to users near and far are equal and affordable. It is the specific intent by allowing these monopolies to protect the rural and remote customers from the added costs of delivery, by spreading the costs more or less equally among all customers. Hawaii Public Utilities Commission should not have allowed Hawaii Electric utilities to collect additional costs of modifying their systems to permit an individual's use of photovoltaics and the grid. Those costs should accrue to the entire utility.

The Public Utilities Commission has been negligent in its duty to serve and protect the public by aiding and abetting our Hawaii Electric Utilities backward looking policies, protecting the use of fossil fuels, and specifically more expensive diesel fuel for the generation of power in Hawaii, and for permitting very high rates of return in this low interest rate environment.

Here on the Big Island, as my family is in the planning stages for building a house, I contacted Helco to inquire about a grid tie photovoltaic system. The response I got was outrageous. Couched in evasive and inconclusive terms, I was told that maybe we could, and maybe we could not utilize such a system, depending upon how many other power customers on that circuit were utilizing photovoltaic grid tie systems. The Helco representative also said that if permission were granted, it would only be valid for one year; and we must submit our house plans with the application.

If a solar system is to be installed, the entire design of the house must take that into consideration: directional roof orientation, roof square footage, room for the solar equipment that is not installed on the roof, wiring sizes, and other factors. And if permission to connect the solar system to the grid is denied, all that design cost will

P. O. Box 390730, Keauhou, Hawaii USA 96739

tel (808) 322-5075

konavu@hawaii.rr.com

have been wasted. Further, it is common for building projects to take longer than one year.

In view of the discouraging beaurocratic policies, we have decided to install a stand alone photovoltaic system which does not connect to the grid. We expect our cost of electricity to be less than \$0.25 per kilowatt hour including equipment amortization, compared to \$0.44 presently on the Big Island.

It is easy to forecast that tens of thousands of homeowners and small businesses will make the same decision in years to come. The outcome is also easy to ascertain. As fewer customers use Hawaii Electric Companies, their cost of energy will have to rise sharply in order to cover the fixed costs of generation and transmission. In a few decades, perhaps the only customers using the Electric Companies will be cities, counties and large companies that do not have the roof area or capital to mount a photovoltaic system. A kilowatt hour from them could then cost several dollars, and street lights could become unaffordable, unless they are also replaced with stand alone photovoltaic light standards. Subscriber numbers are already shrinking in some jurisdictions around the country, as solar technology improves and costs plummet.

Please pass SB 2656 to keep the lights on! A vote for SB 2656 will save the PUC and HECO from themselves and their isolated, backward looking and shortsighted policies.

Respectfully submitted,

SB 2656

(Although the testifier below mentioned SB 2636, the bill that he submitted this testimony on is SB 2656)

I would like to express my support for SB 2636. I have lived in Hawaii since 1959 and I have seen electric bills go from almost nothing to a payment that is much bigger than a car payment!

As a power generation and distribution company HECO has a conflict of interest with the photovoltaic industry.

HECO is a public utility, not a for profit corporation.

The lack of preparation on the part of HECO is grossly irresponsible. The should have anticipated the grid saturation issue and come up with a solution rather than letting the grid saturate and then for all intents and purposes shutting down the photovoltaic industry.

I had the unfortunate experience of working for HECO as a contractor to upgrade a wastewater treatment facility. In my career of more than 30 years I have never seen such a level of gross incompetence. For example, the HECO project manager hired a consultant to do the engineering for the project and a project manager to do the project management. All the HECO project manager did was delay the approval of submittals. The entire HECO "engineering team" made fundamental errors in the design of the system and they actually believed that they were correct and that all of the reference sources were incorrect until their temporary system failed within a matter of weeks.

Hawaii will not be able to successfully implement the reduction of reliance upon fossil fuels for electrical power generation as long as HECO is a power production public utility with a direct conflict of interest with the photovoltaic industry.

Bruce Huddleston
865 N Kalaheo Avenue
Kailua HI 86734
808-261-3383.

SB2656

Submitted on: 2/2/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Kelley Lum Oshiro	Individual	Support	No

My name is Cynthia Cantero and I live in Ewa Beach. I'm a customer of the utility and a customer of the solar industry. I have to live with the repercussions of HECOs negligence every day and I want to make it clear what the consequences of inaction are. This isn't just a policy discussion. People's lives are hanging in the balance. My life is hanging in the balance, and I want you to understand that.

I first looked into installing solar in June of last year. I interviewed five companies. I sat them down and I said I need you to guarantee me that this will be an easy, stress free process. I have five kids, I live on a single income and I've been battling cancer since 1998. I was due to start a treatment for complications from my cancer, but it depends on having a stress free environment. I wanted to install solar so that I could give a measure of security to my kids. I took out a loan and I signed the contract in August. HECO came out and changed our meter and told me I was ok to go ahead. Two or three weeks later I got a letter in the mail telling me that the grid was too saturated and I couldn't move forward with the installation. I don't understand why they didn't see this coming earlier?

I can't give that loan back. My loan payments are \$480 a month and I'm still paying my electric bill. I used to pay over \$500 a month, now it's down to \$300 or \$400 because I've stopped using air conditioning. Thank God it's been cool lately, but I don't know what I'll do when the temperature rises again. Because of the medication I'm on, my condition gets worse when I get hot.

But besides what I'm going through personally, what angers me the most is the impact this is having on my family. The one thing I've always promised my kids is that I would give them an opportunity to get an education. My son has never worked more than 20 hours a week while he was in school. But this semester, I had to ask him to cut a class, and double his hours, because we need the extra income and if this doesn't get resolved, we will be facing foreclosure.

The longer that I wait to go on the treatment, the less chance I have of beating it. Every day that this doesn't get resolved might mean one less day I have to spend with my family.

I tried to do everything right. I did my homework. I didn't rush into anything. I had no reason to think that I would be stuck in this nightmare. And because you didn't do your job, I have to live with the consequences and I want you to live with those consequences too. Yesterday, I didn't see a light at the end of the tunnel. Today, if this bill passes, that will be my light at the end of the tunnel. We can't go back, we can't fix all the mistakes that were made. But we need a solution now. I need a solution. My family needs a solution and my life depends on it.

SB2656

Submitted on: 2/2/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Steven Barnes	Individual	Comments Only	No

Comments: I strongly support SB 2656 requesting the PUC to adopt rules allowing solar to be connected to the grid. I am a home owner. I had installed some solar before the recent rules were enacted by HECO. I need to add more solar and am stuck in a requirement to upgrade. I support the solar industry. I support our independence from fossil fuels. I need to add more solar to charge my electric vehicle. Please help us by your vote and support on this bill. Thanks.

SB2656

Submitted on: 2/2/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

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

SB2656

Submitted on: 2/2/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Howard R. Andrus	Individual	Support	No

Comments: Please support this bill. I think it is in Hawaii's best interest to modernize the electric grid just like the sewer and water system needs to be upgraded. Our electric grid should be modernized because we are not tied to the mainland grid and are most vulnerable to natural disasters. Thank you very much, Respectfully, Howard Andrus
Kahalu'u resident.

SB2656

Submitted on: 2/2/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Chris Mills	Individual	Comments Only	No

Comments: I am in full support of SB 2656 in order to improve the modernization and accessibility of the Hawaii electric system. I am also in full support of Hawaii's Clean Energy initiative in its efforts to achieve 70% clean energy by 2030. With that being said, I believe Solar energy is our best bet to achieve these efforts for we are the most reliant on Fossil Fuel energy than any other state in the United States. Before we can completely change consumer habit to be more efficient, we need to offer a solution and grid modernization allows the public, private and government entities to take advantage of our abundant sunshine for energy resource.

SB2656

Submitted on: 2/2/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Jade DeBone	Individual	Support	No

I am retired living on social security and a small pension. Three years ago in march 2011, I researched the solar costs and decided to install solar. Because of the cost and my age (70's) I decided that I would buy a solar lease for 20 years. The last 3 years, my yearly bill for electricity went from \$5000 plus to less than \$600. Even with the cost of the lease I will be even by 2018. When you are paying more for electricity than for other costs (the mortgage is paid off) it makes my budget much easier to control. I suggest solar for people on a budget and with no chance of additional income.

Thank you for hearing me out

Jeannine Poling
59-065 Kumupali Road
Haleiwa, HI 96712\ (808)638-5130

I support SB 2656 because it is taking steps toward Hawaii becoming more energy independent. I hope our legislators take some concrete, timely action with regard to the HECO fiasco relating to rooftop PV installations for utility customers. It is also imperative that our legislators take immediate action to ensure that Hawaii has a "smart grid" in the very near future. It is time for the PUC to have more authority, financial support and specific plans to remedy this long standing problem and ensure that HECO takes responsibility for modernizing the grid.

I, like many others, have been adversely affected by HECO's arbitrary decision to change their interconnection procedures suddenly, without warning, on 9/6/13. I invested many months researching rooftop PV systems, contractors, and suitable finance options in hopes of making the right decision for myself and family. In August I signed a contract with a reputable solar company, made a \$8000.00 deposit, took out a loan for the balance of the cost and anticipated the installation of our system to be completed by late September. Low and behold HECO had other plans for us and many others. After making the financial investment in August I learned of HECO's new requirements for interconnection procedures and found out that HECO would not be approving our NEM application anytime soon because we live in an area with a highly saturated circuit. HECO could not give me any definitive answers as to the timeliness of the required studies or upgrades in order to approve my NEM application. I am now out my deposit, have a

monthly loan payment, and still have to pay an exorbitant electric bill.

In November it appeared that there may be light at the end of the tunnel for those of us that could prove that we made a financial commitment with a solar company and/or lending institution prior to 9/6/13. I complied with all the requirements outlined by HECO and learned that my NEM application was eligible for review under the Interconnection Transition Plan. That was more than two months ago, still no approval because the infamous studies and upgrades have not been completed or determined.

Since September HECO has been saying they need to conduct numerous studies, test new technologies to make the grid able to respond more nimbly to changing demands and to store excess green energy, and take other mitigating steps to insure safety and reliability for all. The inter-connection studies should have been done by HECO as part of their routine distribution planning studies. Why has it taken so many months to conduct studies that should have already been done? What has HECO learned from these studies? Why was HECO not prepared for the increased level of PV installation when Hawaii's Clean Energy Initiative was launched back 2008, 5 years ago. Why is it that HECO does not have to comply with any reasonable deadlines to complete their numerous studies and come up with upgrades to their system? In other words, what has HECO accomplished

since September other than putting a halt to PV installations across Oahu.

It is in the public's interest that you legislators ask these tough questions and require that HECO take corrective action in an expeditious manner. All residents of Hawaii should have the right to install and the ability to interconnect to the grid regardless of location of their residence. It should not be allowed for just those who had the resources to make the investment prior to 9/6/13.

Hawaii's energy cost have increased nearly 50% in the past 5 years. Solar PV is a way residents can reduce the financial burden of their escalating HECO bills and take care of our environment. Clean energy is important for all generations, however it is particularly important for our aging population who are faced with fixed incomes. It is everyone's kuliana to take all reasonable measures available to move Hawaii toward sustainable clean energy independence. As legislators you have the ability to enact laws to ensure that we meet our clean energy goals. You have the ability to hold HECO responsible for their inactions that have severely impacted many residents.

Please support SB 2656.

Gloria Adams
gloriaadams4@gmail.com

Greetings,

I am also one of those people with PV panels installed on my roof, but unable to turn on until HECO finishes their grid assessment. My electric bill was over \$500 last month (and I use A/C sparingly). Although I am fairly conservative, I believe strongly in alternative energy as the future for not just Hawaii but the whole world. I own both a hybrid vehicle and a fully electric vehicle. HECO needs to embrace alternate energy and bring it in to their business model instead of trying to limit PV as much as they can. They should have upgraded the grid years ago, I understand they even got federal funds to do so and then failed to use that money for grid improvements. Alternative energy is where the world must go and I find HECO's passive aggressive footdragging on this issue to be unconscionable.

John Coller
94-1111 Kaloli Loop
Waipahu, HI. 96797

Testimony in Support of SB 2656

Joint Committee hearing ENE/CPN

DATE: Tuesday, February 04, 2014
TIME: 2:45 p.m.
PLACE: Conference Room 225
State Capitol
415 South Beretania Street

Dear Committee Chairpersons Senator Gabbard and Senator Baker and Members of the Senate Energy and Environment and Commerce and Consumer Protection Committees,

Thank you for the opportunity to testify in support of SB2656 RELATING TO THE MODERNIZATION OF THE HAWAII ELECTRIC SYSTEM. I support this measure with amendments.

I am an independent, commission-based, Authorized Independent Representative for Hawaii Energy Connection (KumuKit). My Job used to entail meeting my neighbors and giving them the opportunity to save thousands of dollars in electric costs by purchasing a KumuKit. Making a living as a sales professional while helping Hawaii residents was something I was proud to be able to do.

Not anymore. Since HECO changed the requirements for residential Photovoltaic interconnection under Net Energy Metering in September 2013, over half of my sales have been put on hold. Many families are hesitant to even sign a sales agreement because they are afraid HECO will find a way to charge them money anyway or delay their installation. Even with no risk, no down payments or exposure for them to submit a Net Energy Metering application, they balk. Potential customers who may just be thinking about installing PV and want to learn more are now too scared to even contact our office to inquire about PV; new sales leads are so scarce that my livelihood has been put in jeopardy.

Being a commission-only sales professional in this market used to be a good job. Now, making ends meet is challenging. I have a mortgage and 2 young children; my wife works full-time, but we need 2 steady incomes to survive. Over half of my income has been lost since September- I have approximately 20 signed contracts that are currently on hold. And its not just about me and the 20 families not able to get a KumuKit; every KumuKit that gets installed results in work for many full time employees at Hawaii Energy Connection: office staff, managers, project coordinators, electricians, warehouse staff, and a host of others. The delays that are now "Part of the Process" are unfair, unreasonable, and financially unsustainable for me.

Because of these reasons I support the intent of this measure. Further, I humbly ask that the committee look at amending the measure making the reporting back to the legislature sooner than the current language in the bill, which states that reporting will be, "...sometime before the regular session of 2016." HECO wants delays- Current Federal Tax Credits (30% of system price) are set to expire in 2016, potentially making PV less affordable should the tax credits disappear or are reduced. HECO also has more time to raise rates and the longer HECO delays PV installations, the longer they have potential PV customers as rate payers. Time is on the Utility's side, not the public's.

Mahalo,

Jason Kanani Ignacio
Authorized Independent Representative
Hawaii Energy Connection- KumuKit

SB2656

Submitted on: 1/31/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Ed Wagner	Individual	Oppose	No

Comments: Members of ENE/CPN Committee, This bill appears to be an attempt to deceive the people into thinking that they are getting a publicly OWNED community renewable energy program when all they will get is another approach for our utility monopoly to control them and control our energy future in a community-BASED renewable energy program, not one that is community OWNED. Stop deceiving the people and do what you have been talking about doing for the past 30 years - create publicly OWNED, municipally OWNED. or if necessary, state OWNED, but still public, utility coops on each island. This is what the people expect you to do, not keep protecting, supporting, and perpetuating this incompetent, grossly mismanaged, perhaps negligent company for another 100 years all the while it continues to fleece and financially rape our people because of its idolatry of money (Pope Francis) and its idolatry of power. It is time for social justice to prevail, for David to slay Goliath!

SB 2656

- I support giving people the right to solar. Since 2009, the average residential rate have gone up by more than 50%! People should have the ability to pursue cleaner and cheaper options.
- Solar has been a major, sustainable economic engine for Hawaii. As of 2012, it accounted for 28% of all construction expenditures in the state.
- HECO has repeatedly failed to demonstrate a plan for growth of innovative technologies. The PUC needs to chart a way forward on grid modernization that is fair and efficient for everyone.

Swami Om

SB2656

Submitted on: 1/31/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
David Henkin	Individual	Support	No

Comments: Please pass this bill to help wean Hawai'i off dirty fossil fuels and to ensure that everyone has access to cheap, clean, renewable energy. Mahalo.

Solar energy is a fantastic source of renewable energy for our, and future generations. It's important to continue to use solar as a source of energy for environmental and fiscal reasons.

Brooks Obr

M4 Medical Student

EMIG Co-President

University of Iowa CCOM

Pager #8932

To whom it may concern,

I am writing in approval of bill SB 2656. We absolutely need to tap resources other than oil for energy and this will allow us to do so.

Please get this bill passed as the livelihood of humanity and this beautiful planet depend upon action like this bill!

Sarah McCallum

SB2656

I understand the need for Base Load as things are now set up. But instead of thinking of putting an underwater cable from Maui or Lanai at a cost of \$1B why not install a large reservoir up in the mountains and then use solar power from everyone's roof (\$1B could install a lot of solar). Then use that solar to pump water up the hill during the daytime hours and then you have on demand power whenever via hydro turbines! Yes you loose about 25% of your electricity but what a cheap and easy and environmentally friendly way to do it.

Take a tip from China - that is what they do.

Then everyone in Hawaii can have solar panels and hot water panels on their roofs.

Thanks for considering my idea.

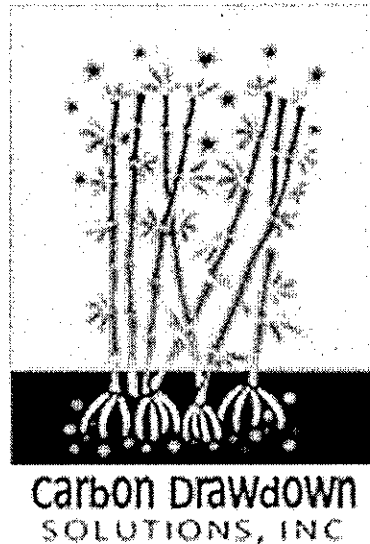
Charlotte OBrien

Charlotte O'Brien
President & CEO

Carbon Drawdown Solutions, Inc.
PO Box 1341, Haiku, HI 96708 USA

Tel. + 1 (808) 344 5339
char@cdsbiochar.com

Skype: soilcarbon or
+ 1 (831) 824 7777



I am a member of a household who has seen our electricity bills reduced to nearly nothing after installing solar PV. I hope that everyone who wants to utilize PV can do so. For this reason I support SB 2656 that would allow the grid to be modernized. Clean energy is the way to go, especially for Hawaii, which is blessed with abundant sunshine.

Aloha,
Jolyn K. O. Rosa

Dear Sir/Madam,

I am testifying in support of SB 2656 because I feel we (as a society and as a state) need to move quickly toward using renewable sources of energy which allow us energy independence and don't take a toll on the planet. Additionally,

- I support giving people the right to solar. Since 2009, the average residential rate have gone up by more than 50%! People should have the ability to pursue cleaner and cheaper options.
- Solar has been a major, sustainable economic engine for Hawaii. As of 2012, it accounted for 28% of all construction expenditures in the state.
- HECO has repeatedly failed to demonstrate a plan for growth of innovative technologies. The PUC needs to chart a way forward on grid modernization that is fair and efficient for everyone.

Thank you,
Julia Horn
82-6000 Napoopoo Rd.
Captain Cook, HI 96704

As a PV user for 24 years, I can brag about never a blackout or shutdown, cooking electrically, running the house and workshop and heating water with PV, and in general enjoying the benefits of Hawaiian sunshine. Although off grid, I can sympathize with those who want to intertie with the grid, the damage to their pocketbooks and their frustration at being stymied when trying to do the right thing for the planet. With the continual reports of rising atmospheric CO2 coming to us directly from Mauna Kea, this is no time for the utilities to shut down progress to save their bottom line.

Marie Fontana
Kapoho Road
Hi, 96778

SB 2656

My wife and I are HECO residential customers who were able to install pv and water heating systems prior to the slow down. HECO's constriction of solar installations strikes me as protectionist, obstructionist, and anti-environmental. That HECO did not see the solar wave coming is no excuse for its out of date engineering and outmoded infrastructure. Its inabilities to plan adequately and to rise to current conditions reveal the problems with "favored" utilities that have no competition. The game has changed, and HECO needs to keep pace and work with alternate energy providers, not try to kill the competition, as recent reports would seem to imply that it is doing.

On another note: our modest pv system generally produces more KWH than we use. These go directly to HECO, which does not in any way reimburse us for the excess power that flows from our roof to their grid. Thus, they are getting free power from many, many solar users. This is wrong. While they do "bank" excess power for one year for residential customers, they empty that credit bank annually, forcing customers to start over. While they get the "emptied" power. Not right.

Solar development in Hawaii needs better oversight--PUC should have that oversight, not private single for-profit monopolistic utility companies on each island.

Thank you for considering my testimony.

Stephen Canham
46-156 Nahiku Place
Kaneohe, HI 96744

SB2656

Submitted on: 1/31/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Pohakamalamalama Palmer	Individual	Support	No

Comments: I lived for 8 years off grid on 8 solar panels. If Electric company kills this bill I'll be happy to show folks how to live without them.

Please support rooftop solar, as I do.

We are not fools.

Aloha,

T. Gambino

SB 2656

- Aloha,
- Please help to solve this major problem for the families of Oahu. HECO gave out over 5 million dollars in bonus's last year while our rates are soaring with no end in sight. The grid is in terrible condition and solar cannot be added in certain areas due to HECO's ineptitude. To make matters worse people who wish to put solar on their homes cannot due to HECO not planning ahead for this future that is here now. It is absolutely ridiculous that a company can have such a monopoly on a basic need like electricity. Below are more reasons:

-
- I support giving people the right to solar. Since 2009, the average residential rate have gone up by more than 50%! People should have the ability to pursue cleaner and cheaper options.
- Solar has been a major, sustainable economic engine for Hawaii. As of 2012, it accounted for 28% of all construction expenditures in the state.
- HECO has repeatedly failed to demonstrate a plan for growth of innovative technologies. The PUC needs to chart a way forward on grid modernization that is fair and efficient for everyone.
-
- Thank you for your time,
- Kelly Tsutsui
- Haleiwa, Hawaii

- Re: Solar Energy,
- I support giving people the right to solar. Since 2009, the average residential rate have gone up by more than 50%! People should have the ability to pursue cleaner and cheaper options.
- Solar has been a major, sustainable economic engine for Hawaii. As of 2012, it accounted for 28% of all construction expenditures in the state.
- HECO has repeatedly failed to demonstrate a plan for growth of innovative technologies. The PUC needs to chart a way forward on grid modernization that is fair and efficient for everyone.
- Provide your own perspective: why do you care about rooftop solar?

Sylvia Hamilton Kerr
Haiku, HI

Dear Sirs and Madams,

Please consider SB 2656.

Of all states, Hawaii is the most Petroleum dependent and of course the most isolated. With no natural petroleum resources, Hawaii is at the mercy of oil rich nations; alternate energies have been promoted for our Island state for over 40 years.

Whether geothermal, wind, photovoltaic or even yet to mature technologies like harnessing the waves, these "green" technologies have been discussed and/or utilized for decades. Even activists who once protested technologies such as geothermal are now strong advocates for it's expansion.

HECO had AMPLE time and opportunity to modernize their circuitry over this period but chose to use their resources otherwise. Indeed, if the phone company followed the same logic, then we all would still have not only land lines but also party lines and require operators to connect our calls to neighbor islands and out of the State!

Why then is the general public penalized for the poor planning (and greed) of HECO? Why is the average citizen of this State now "taxed" by this public utility? Our retired parents struggle with the constant increases and often "live in the dark".

HECO has proved that they lack the desire to look out for the general interest of the public. While far from perfect, this is a step in the right direction by giving some teeth to the PUC.

Please consider SB 2656.

Thank you for your time and consideration.

Mahalo,

Daven Chun

- Our state should be a model of alternative energy usage throughout the world! We have more solar, wind, ocean energy resources than nearly any other state or country. Its a CRIME not to use it!! Every building in Hawaii should be supported with solar energy. There is no excuse for HECO's resistance, except to put more money in the corporation's pockets.
- I support giving people the right to solar. Since 2009, the average residential rate have gone up by more than 50%! People should have the ability to pursue cleaner and cheaper options.
- Solar has been a major, sustainable economic engine for Hawaii. As of 2012, it accounted for 28% of all construction expenditures in the state.
- HECO has repeatedly failed to demonstrate a plan for growth of innovative technologies. The PUC needs to chart a way forward on grid modernization that is fair and efficient for everyone.Ou

Robin Youngblood

I support SB 2656 ensuring homeowners the right to install solar PV on their private homes. HECO is a publicly traded company mainly selling electricity and banking. They are free to be innovative in new technology yet they have not become serious about saving energy until the PV solar boom starting taking place, eg., switching to coal or gas electricity producing generators instead of diesel, etc. If HECO continues to block business and private homeowners from being able to install PV, the next step is to go " off the Grid" which is starting to happen now. I have had solar water for years. Recently I installed PV on my roof. The next step is getting rid of my gas car and buying a EV car, and happily using HART! I'll do my share to go green. Local Hawaii government needs to empower citizens and encourage big business to do the same. Mahalo

Chris Jansen. 95205 Paeheu Pl Mililani HI 96789

To the Hawaii government,

I firmly stand behind rooftop solar. I think this is the way forward, and we need to make the necessary changes in our infrastructure to accept this change. SB 2656 should help accomplish this, and I don't want to let inaction on your end stop homeowners from going solar. Please make the necessary changes so that all of us can enjoy the benefits of solar electricity and help keep our island beautiful!

Thank you!

- I support giving people the right to solar. Since 2009, the average residential rate have gone up by more than 50%! People should have the ability to pursue cleaner and cheaper options.
- Solar has been a major, sustainable economic engine for Hawaii. As of 2012, it accounted for 28% of all construction expenditures in the state.
- HECO has repeatedly failed to demonstrate a plan for growth of innovative technologies. The PUC needs to chart a way forward on grid modernization that is fair and efficient for everyone.

Best,

Nick Ochi

SB2656

Submitted on: 1/31/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

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

I strongly support SB2656.

SB 2656

HECO has repeatedly failed to demonstrate a plan for growth of innovative technologies. As I observed this over the years, I profited by buying stock in the company, which invests profits from the sale of electricity into unrelated businesses to benefit shareholders, not customers. Meanwhile, the antiquated grid has languished while HECO heats the planet burning ever more expensive foreign oil. Now HECO plans to profit from its own solar installations while denying customers the right to the same.

The PUC needs to chart a way forward on grid modernization that is fair and efficient for everyone. An excellent beginning would be to change HECO into a non-profit public utility whose mission would be to serve customers, not shareholders.

Aloha,
Bruce Ellinwood
46-074 Puulena St #1126
Kaneohe, HI 96744-3751
808-398-9622

- I support giving people the right to solar. Since 2009, the average residential rate have gone up by more than 50%! People should have the ability to pursue cleaner and cheaper options.
- Solar has been a major, sustainable economic engine for Hawaii. As of 2012, it accounted for 28% of all construction expenditures in the state.
- HECO has repeatedly failed to demonstrate a plan for growth of innovative technologies. The PUC needs to chart a way forward on grid modernization that is fair and efficient for everyone.
- We need more sustainable energy mixes, and rooftop solar is the easiest and best way to get it!

Thanks
Don

Donald Erway
77-6455 Princess Keelikolani Dr.
Kailua Kona, HI 96740-2419

My electric bill averages \$500 per month on Kauai! This is more than the \$4.50Gal auto gas price! We have one window AC unit (8000 BTU). I'm a nine year plus USAF veteran. Why doesn't are local government help more with utility cost control? Who fights for us? Kauai always has to shut up and take it!

William Combs

Testifying in support of SB 2656

- The more resources we can bring to bear on using less oil, the more independent Hawaii will be and we can then the saving for other programs that will benefit the people of Hawaii.
- Solving our energy issues will give us more time and political energy to concentrate on other important issues, like development, business and education.
- I support giving people the right to solar. Since 2009, the average residential rate have gone up by more than 50%! People should have the ability to pursue cleaner and cheaper options
- Solar has been a major, sustainable economic engine for Hawaii. As of 2012, it accounted for 28% of all construction expenditures in the state.
- HECO has repeatedly failed to demonstrate a plan for growth of innovative technologies. The PUC needs to chart a way forward on grid modernization that is fair and efficient for everyone.
- The technology is already here, spending the funds to build up our infrastructure will save more money in the long run, not just from efficiencies, but from being a leader, will attract other inovators

Mahalo
Ethan Wung

I support solar for homeowners. We have been told to do this to save the environment. It works in Hawaii. I put in solar early on and had no problems. I think it is more a decrease in profits for HELCO a private company than anything else. The electric bills in Hawaii are unsustainable. In the future will the bills be over a \$1,000 every month. It appears we are fast approaching that. We will be living in the dark ages again because of the profit issue. With solar there would be light for every house.

Linda Randle

The PUC must act to require HECO, and its Neighbor Island subsidiaries, to allow all solar rooftop installations by installing improvements to their grid. HECO is a MONOPOLY. They are delaying installation of renewable energy sources, while profiting from burning fossil fuels that further aggravate climate change. This has to be stopped. The PUC must act!

Sandra

I am testifying in favor of SB 2656.

Sincerely,
Mike Mottl

SB 2656

To our Hawaii Senators.

My name is Cathy Davenport and I have installed PV Solar on our roof this past October 2013 in Manoa Valley. I started my research into going green with installing solar earlier in the year, I attended Home Shows and finally met with 5 different companies in August. I obtained a loan and signed my contract to install Solar panels the first week of September and was told there was up to 4-8 week scheduling time to install the panels, during this time the news from HECO came out. As it was, I fell into their grace period time window but had to submit paperwork to get an "okay" for the solar panels. Due to my father's illness and POAs required, as he is the owner on paper for the home, we were notified that we had to resubmit notarized paperwork over again - which we happily did. Finally after all of this running back and forth, we received a letter to say that more studies had to be done and basically that we are being denied to optimize the use of our solar panels. It would have been fine if HECO had informed us with the first submission of our forms that we were being denied, instead of making us "jump through more hoops" to resubmit forms again for naught. I understand that HECO has to make a profit, but at what cost? By not updating our antiquated grid system for the island of Oahu over the years... did they not foresee the problems coming as they were having with the islands of Maui and Hawaii? What are they truly doing with their money from their profits, other than paying their stockholders and their little super PACs? I am also a little incensed that HECO is trying to push installing their own Solar Farms at the same time they are saying that the majority of the grids are saturated and can't handle anymore. I have to also, like many others, make payments on my loan and still pay electric bills, albeit a little lower than we were paying before - from \$500+/month to \$300-400/month, which is a strain on wallet. It has resulted in my spending less into our economy because of this.

I also wonder, what would happen to HECO's profits and non-solar customers, if people like me just decided to go the battery bank route with their Solar and not feed their excess energy into the system for the others to use, supposedly Solar power is cheaper to obtain by HECO than with oil/petroleum. I have also thought that if I pay into the costs of upgrading our transformers, what happens down the road... am I paying for myself and future users that may not pay as the transformers are up-to-date? Would HECO refund/credit us the monies we were charged as more users come online with Solar that utilizes the already "paid for" system - would HECO charge the future Solar users monies for use of upgraded transformers? I am also in a dilemma, if the costs to study and have a possible upgrade to our transformers is passed to me at a great cost- can I afford to take another loan out to pay for this or just "go off the grid". Would that not be more detrimental to HECO as they are losing a paying customer(s) and a source of cheap energy?

Again, I understand that HECO needs to make a profit, but I am totally disgusted with their strong armed tactics of fear mongering the public into not going into a greener solution of solar power, our island dependence on a finite source of gas, oil and petroleum needs to be mitigated - but not a steep penalty for the few of us who are trying to think of our and our children's future. This affects everybody who lives and calls Hawaii home.

Thank you and Aloha, Cathy Davenport

SB 2656

Dear Honorable Senators of Hawaii,

I am a resident on the Big Island and my house runs entirely on solar power. I was fortunate enough to have this choice. Please support SB2656 so that others may also have a choice.

I support giving all people the right to solar. People should have the ability to pursue cleaner and cheaper options. Helco has shown that they are not stepping up to be a leader in clean energy technology. The PUC must take the lead to modernize our grid and move Hawaii forward.

Respectfully,

Star Carlin

PO Box 651, Mountain View, HI 96771

We wish to invest in solar power, saved the money, choose a company to assist us and HELCO says "no."

We pay the highest rates per kilowatt hour in the nation, we monitor our consumption of electricity, and want to go solar.

HELCO says no.

Please support SB2656 - the greed and inefficiency of the existing paradigm is undeniable.

Many thanks,
Kimberley Schorr
Pahoa HI 96778

Ladies and Gentlemen of the Senate Committees on Energy and the Environment and Consumer Protection:

I support giving people the right to solar. Since 2009, the average residential rate have gone up by more than 50%! People should have the ability to pursue cleaner and cheaper options. Solar has been a major, sustainable economic engine for Hawaii. As of 2012 it accounted for 28% of all construction expenditures in the Sate.

HECO with it's out-moded business model as a generator of power rather than as a distributor of power, has repeatedly failed to demonstrate a plan or invest in the growth of innovative technologies. The PUC needs to chart a way forward on grid modernization that is fair and efficient for everyone and prod HECO with business incentives to get itself up-to-date.

Thank you,
Mike Kelso
25 South Kalaheo Ave
Kailua, HI 96734

Aloha,

I support SB 2656. Thankfully my family already has rooftop solar, the process was smooth and painless, and we're paying practically peanuts (maybe expensive peanuts) every month, which has been great for our wallet. Most importantly, we are contributing to a more clean and sustainable Hawai'i for our keiki.

We need our utility company to support this movement toward clean energy and be able to ensure access to all families wanting to purchase solar for themselves. It's not just about saving money, it's about saving the planet. If we want a bright future, then solar for all!

Mahalo,
Keiko Gonzalez

Aloha,

I support SB 2656. Thankfully my family already has rooftop solar, the process was smooth and painless, and we're paying practically peanuts (maybe expensive peanuts) every month, which has been great for our wallet. Most importantly, we are contributing to a more clean and sustainable Hawai'i for our keiki.

We need our utility company to support this movement toward clean energy and be able to ensure access to all families wanting to purchase solar for themselves. It's not just about saving money, it's about saving the planet. If we want a bright future, then solar for all!

Mahalo,
Keiko Gonzalez

To Whom it May Concern:

Please protect Hawaii homeowners by allowing safe and reliable rooftop solar panels. (Ground panels should be allowed as well.) These panels should be limited only by capacity, not by HECO. It is unconscionable that we are held hostage by HECO. With no additional usage – in fact, with reduced usage (converting to low energy bulbs, using the timer on the hot water heater, which has solar panels), etc., our bill has more than doubled over the last several years. While the operating costs for HECO may have risen, I doubt very much they've doubled. Additionally, we are paying ridiculous/obscene salaries to top management at HECO.

Aside from these issues, we are all responsible for saving our planet and must rely on the sun, wind and water. This is a world wide issue.

Thank you.

Aloha,
Louise Simrell

Please support the right to install solar energy and insure the PUC has the resources for a modern efficient grid.....and quit supporting everything that the electric company wants, you are supposed to be working for us, not against us.

Patricia Boland

SB 2656

As far as I can see the grid in the state of Hawaii is in deplorable condition. I live on the Big Island in Puna in Leilani Estates close to the geothermal plant. We have regular outages. There is a need for an updated grid in this state. Thank you for your attention to this testimony.

Pete Wilson
13-927 Kahukai Street
Pahoa HI 96778

We now have one solar panel on my mom's old home. when I complete the building on my new home at the end of 2014, I plan on getting at least 4 solar panels to help curb the price of electricity. I am in complete favor of SB 2656.
Sincerely, Colleen Miyose-Wallis
Kailua, Kona resident

I support access to rooftop solar installation for anyone who wants to have it installed. Hawaii has an abundance of clean, natural, solar energy available to us every day. It is almost criminal that we continue to burn petroleum for energy when we have solar so easily available. Solar is good for the earth, because it is clean and unlimited. It is good for the economy, because installation creates construction jobs, and consumers who save money on electricity by using solar are then able to put their money into other sectors of the economy. It is good for consumers. It increases our energy sustainability by decreasing our reliance on imported oil and distributing generating power so that if there is a failure in one locality it doesn't necessarily affect others. Solar can help us to be more secure in our energy supply and our economy.

Please pass this bill. It is a good step towards providing solar access for everyone and securing Hawaii's energy supply well into the future. It just makes sense.

Thank you for your support!

Aloha,
Laurel Matsuda
Kamuela, HI 96743

SB 2656

- I support giving people the right to solar. Since 2009, the average residential rate have gone up by more than 50%! People should have the ability to pursue cleaner and cheaper options.
- Solar has been a major, sustainable economic engine for Hawaii. As of 2012, it accounted for 28% of all construction expenditures in the state.
- HECO has repeatedly failed to demonstrate a plan for growth of innovative technologies. The PUC needs to chart a way forward on grid modernization that is fair and efficient for everyone.

Barb & Terry Travis
91-999 La'aulu St., Unit F,
Ewa Beach, HI 96706

To whomever has the power to help us.

I support SB 2656. I have a solar system producing electricity for me every day. I do not want to see new fees assessed by HELCO to improve the grid on Hawaii Island. I totally support Hawaii State government to play a supportive role by providing direction and funding to HELCO to improve the grid.

Please do whatever you can think of to help people struggling to make ends meet and being willing to invest themselves in an energy producing system for the benefit of themselves and indeed all of us. These systems REDUCE the amount of fuel HELCO has to burn to meet island demand.

Yes, I understand some of the volatile demand issues and infrastructure weaknesses in receiving power and distributing it after sunset.

Still remains, money is being saved at the fuel end. Can these savings be used to upgrade the infrastructure to protect us all while we are reaping the benefits of sun-driven power?

This is of course the right path to take.....

Will we all agree to take it?

Sarah Lynn Joy
81-902 Nape Street
Kealahou, HI 96750

To whom it may concern(I hope it is you!)

I support SB2656. Solar is beneficial for the economy and the people.
Sincerely, Pam Palencia

SB2656

Submitted on: 1/31/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

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

Comments: I support giving people the right to solar. Since 2009, the average residential rate have gone up by more than 50%! People should have the ability to pursue cleaner and cheaper options. Solar has been a major, sustainable economic engine for Hawaii. As of 2012, it accounted for 28% of all construction expenditures in the state. HECO has repeatedly failed to demonstrate a plan for growth of innovative technologies. The PUC needs to chart a way forward on grid modernization that is fair and efficient for everyone.

Hawaii needs more solar desperately. The cost of electricity is too high and HECO has a monopoly in the state of Hawaii. The every day citizen should be able to pick the type of power that is right for them. Solar is cleaner, cheaper and supports a healthy earth. Please do everything you can to unshackle the residents of hawaii from HECO's money grabbing grip.
Thank you
Beth McLachlin

While my story is probably common, I too am extremely frustrated with the government supported monopoly, HECO. My wife and I are both teachers and making ends meet with teacher pay, two young children, and the cost of living in Hawaii is a challenge. However, we also believe in supporting the environment and thought we could save money in the long run. The reality has been very different.

In June, we started talking with PV companies about solar. After doing our due diligence, we selected a company who assured us within 6 to 8 weeks we would have our solar system and we made a \$12,000 down payment.

In the ensuing months, we heard numerous stories and flat out lies from HECO. HECO has told us: it "would be a few weeks for approval" to "you must wait for an indefinite period of time." We contacted our elected representatives and they don't return calls or emails. We are completely powerless to the power and political influence of the monopoly of HECO....and our \$12,000 is in the bank account of our solar company for the past 6 months.

HECO's incompetence to prepare and arrogance to be not be honest should not impact my ability to be environmentally responsible and my savings account. Unfortunately, HECO negligence is causing both. We are powerless to this government supported monopoly.

Please help us!
Sincerely,

Steve and Trisha Caley
95 1344 wikao street, mililani.

SB2656

Submitted on: 1/31/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Joy Marshall	Individual	Support	No

I wholeheartedly support rooftop solar as a cleaner and cheaper alternative energy source. HECO's obstructionist tactics and policies are adverse to consumer's interests and should not be allowed to prevail.

David W. Hall
3462 Kahawalu Drive
Honolulu, HI 96817
dhallhi@yahoo.com
808-284-6320

For a total of ten years, I have lived in two different homes that were TOTALLY powered by solar. It can work. Give it a chance!

Kate Keilman
Kate the Computer Tutor
www.computerkate.com
(808) 224-1186

SB 2656

I have long worked in the electrical industry. 30 years now. Have worked with HECO for many years. In 30 years they have not changed. I wish I could be there for the upcoming hearing, but am currently visiting family in Wuhan China.

In my few trips to China I have experienced the way the big communist government here operates. Insensitive to the public, rigid policies, and misrepresentation of the truth. HECO's operation is alike this in many ways.

What people fail to understand is that HECO is a private entity. They have their own interest at heart. And rightly so. You can't blame them for wanting to preserve their way of life. This is where the PUC should come in. The PUC has a fiduciary responsibility to serve the public's interest. During this time of PV chaos they are silent, even aligning themselves with HECO. They should not be allowing HECO to run rogue as they have been.

Being in the industry I have had meetings with HECO to discuss their issues. I have gathered some issues I believe the lawmakers should be aware of.

HECO did not get PUC approval to implement these new policies. This should not be allowed.

HECO should not be allowed to have an opinion or advertise any opinions out of their jurisdiction. Such as PV sales and contracts on private companies.

HECO should not advertise or state that they need to review battery or any other types of systems which are not utility interactive. I believe their interest there is to discourage these installations and bog them down. The current tariffs do not allow them to have opinions on these matters. In addition to that, HECO should not be allowed to make any public statements which misrepresent the truth.

The IRS studies should be done and controlled by a third party. They should be made transparent.

The upgrade costs should be given out in a timely matter. I believe the delay in these unknowns are made to deliberately scare the public.

The timelines they give out on approvals are grossly understated. I have experienced these first hand. When customers call, they give out rehearsed responses frustrating the customers.

HECO has admitted that they don't entirely know what the proper threshold is. And is using the DML in spite of that. The third party IRS studies should determine the threshold and should be based on real technical data.

Some of these points stated above cover the bill and some are related. The point is that the utility company has been deliberately trying to crush the PV industry to serve their own interest, with the PUC standing idly by. This is clearly antitrust.

Thank you for hearing me.

Ladd Tsuda
98-1430D Koahehe St.
Pearl City, HI 96782
808-388-3156

SB 2656

Dear Honorable Legislators,

This bill makes so much sense, so I'm asking you to pass the bill so we have the right to rooftop and other types of solar systems. I mean, we ARE living in a true sunshine state, more so than states on the mainland. And their rates aren't going through the roof like they are here!

Solar systems provide work for residents, and savings for all of us, as well as being cleaner and cheaper. Let's keep Hawaii moving forward and out of the dark ages, literally.

Thanks,
Patti Valentine
PO Box 194
Kapaa, HI 96746

"The question is not whether we will be extremists, but what kind of extremists we will be...The nation and the world are in dire need of extremists." -- Rev. Dr. Martin Luther King Jr.

We are in support of grid modernization so that people can put solar panels on their roofs. We have solar panels ourselves and the electric bill is so much reduced. It is incomprehensible that clean energy could be thwarted by not allowing solar energy to go forward. We NEED solar energy which is readily available in our state.

Gabriele and Oscar Jaitt, Puna district, Paho, HI 96778

The hen house is the solar voltaic system of which the oppressed people need to save money. The Fox in the (Hen) house = HECO etc. What in the heck do you propose a corporation that will lose profits to say that solar must be curtailed as they lose money? Monopoly is illegal isn't it?

Gary Foster

Right now I am living without electricity because I just can't afford the high rates. Imagine living with no fridg, no hot water and no fans. Put yourselves in our shoes. Try it for just a week and see our plight. Please help us work out this solar issue so I no longer live in the dark!

Gigi Evora

SB 2656

To Whom It May Concern:

I have lived on Maui since 1986. The electric bills have sky rocketed. As consumers we minimize our needs more and more to bring down our rates we pay to electric companies yet the bill goes up and up. Where does it end? Our salaries do not rise in proportion to the electric bill and other bills. We need options and to go solar makes the most sense..... even Germany uses solar who doesn't even have sun power like we do to help with their economy. Oahu wants to get electric power from Maui.....no, put up solar and wind mills over there and deal with it. The job of the electric company is to have foreseen this coming and they didn't. Now to make the consumers suffer with huge bills and environmental distress is not correct. I feel they don't want consumers to go solar unless they make a profit.....after all they are in business for their needs not ours. Time to crack down and bring in the competition.....bring rates down. I support solar.....

Sincerely

Dhyan Sandhya

Kihei, Hi.

To whom it may concern,

It is a crime to not allow someone to enjoy the benefits of their own solar system. In fact it is a crime to allow HECO to monopolize each island and then NOT allow rooftop solar! I understand that their is a lot if money to be made by HECO and also a lot of bribing on their end to keep solar off of rooftops. I ask that you please support this bill and stop the nonsense and show some Aloha! From my own experience with HECO I had my own rooftop panels installed for a year and each time HECO said I had to wait to turn them on and finally after countless phone calls a "technician" came out and just flipped a switch and then it was on.. It only took 2 minutes from start to finish! I Waited one year for a two minute job! So I do know that HECO needs to stop being a bully and let everyone enjoy.

Joseph K. Simpliciano Jr.

I am testifying in support of SB 2656. Please enact this bill, as it will point Hawaii in the direction it needs to be headed if it intends to function and thrive in a rapidly shifting energy situation. If you are serving your job for the good of the people and our progeny, you will understand that it is the way of the future and is for the best. It would not be difficult to implement a plan to allow every rooftop in Hawaii to easily install solar. It would be an amazing feat.

Thank you,
Zach Parlee, Mililani Resident

SB 2656

My residence is in Kailua Kona, Big Island. We installed solar panels on our home three years ago. We are retired and are on a fixed income and look for ways to maintain projected living expenses for years to come as our income does not provide for increases in costs...especially for very expensive electrical power.

Although it is not on the agenda, someone needs to explain why we have not tapped into the huge abundance of geothermal power. It is readily available, easily accessible, conveniently located, and abundant to say the least. If areas like the Geysers in California can justify costs to produce power where utility rates are one third of ours, what is preventing this energy source from being implemented. This situation demands an explanation and action.

Re: Solar. We generate more power than we need, every month, all three years. We have no need to conserve as during this time we have "contributed" back to our utility over 3500 KWh. That is about 100 KWh per month! We are not compensated for this "give back" unless we go on a ridiculous contract to be a "generator of power" where we give all we produce at half cost and pay for what we use at full price. What a rip. They have their cake and eat it too at the expense of the citizens.

Ok, we over-produce so we purchased a small electric car to use some of our excess...only some as we still donate back to the utility. What is really exciting is that in the last month, we have driven our little used ZENN (2009, less than \$10,000 delivered) over 500 miles which means we have saved 22 gallons of gas and all the emissions that enter the atmosphere and sea not to mention the amazing comfort of driving along with power directly from the sun.

By limiting solar installations on roofs, our utility companies are overstepping their monopolistic power to perpetuate the consumption of fossil fuels...more costly both at the pump and to the environment. It is time to move from the dinosaur of fossil fuels to sun power...it is by far more direct, cleaner, omnipresent and so much less expensive.

Yes, dinosaurs died out and hopefully the monopoly of utility companies will also die. Either they figure out a way to embrace the perfect marriage of solar power and Hawaii or become extinct. As a matter of fact, both options would be best for the island inhabitants.

Of course they will argue that the infra structure requires income. Indeed, it does. However, not to the extent of eliminating this amazing source of power. They should skinny down, become more efficient, eliminate the largess of their monopolistic bureaucracies, and figure out a way to make it happen while embracing the sun and all it can do for each of us, the community and all the inhabitants of the island and sea that are affected by the consumption of fossil fuels and whipping wind mills. Just ask the birds.

Sincerely,

Dennis Mihalka
Kailua Kona, HI

Dennis

I STRONGLY SUPPORT SB 2656. I am a homeowner who has solar water heating but not full solar. I WANT to invest in my home, the local economy, and the 'Aina by converting to solar. I am a registered voter who never misses a vote. I pay close attention. I strongly urge you to support this bill. Oahu MUST become a leader in alternative energy sources, and the sun is an obvious one. Make HECO get on board!

Thank you,

Barbara L. George
58-126B Iwia Place
Halewia, HI 96712

I support SB 2656, a bill that gives the PUC funding to start a grid modernization proceeding and establishes the policy that people can interconnect to the grid (unless there are safety or reliability concerns).

Thank you for your time.

Renee

My name is Lono Koholua and I think people have the right to solar or natural energy period. I live in Kailua on Oahu and also have been told that our grid on this side is filling up as well. I plan to put photovoltaic on my roof just haven't been able to get the funds together just yet, due to the fact that I also need a new roof. I was told that by the time I am ready for solar, which should be by the end of the year, I would not be able to have it. We all have the right to natural energy, so why are there limitations on who and how many people can have it? Is it due to lack of profit? It seems as if HECO will lose too much money if we all go solar. I feel for them, but times change. They have monopolized the electric market for decades and have made a lot of money. When will the greed stop. Bottom line is we should be pushing for modernization and taking advantage of our natural resources not putting limitations on it, solar for everyone!

I would like to present oral testimony at this hearing.

Thank you. Lana Brodziak

SB 2656

Dear Commissioners,

We are at a turning point in right of free choice involving the will of the people of Hawaii in advancing into technology or sustaining the archaic business model of Hawaii Electric Industries (HEI). My story is not unique to the plight of thousands of other HECO customers currently being denied the choice of photovoltaic power generation. When my wife Jan became disabled last year and needed to stay home to recover she needed air conditioning due to the heat of the day. We decided to take money out of our 401K savings to invest in a greener technology and to reduce our electric bill which had sky rocketed as a result of increased electrical demand. We completed our agreement one week after HECO's sudden policy change went into effect. While HECO says it was for the safety of the grid, there has never been an outage caused by photovoltaic (PV) power generation. Their safety margin (saturation point) appears to be manipulated by their own record keeping to reduce the introduction of more photovoltaic power. Second, the saturation point HECO uses "daytime minimum value", is so ambiguous that again it allows HECO to strangle the growth of PV generation. Reports by federal renewable energy agencies state that HECO can easily allow (with little to no grid improvements) the increased introduction of renewable energy by thirty percent of its current values. We urge the PUC to steer HECO to seriously start a smart grid modernization program that will accommodate the growth of PV generation. 2nd, that HECO start to plan PV power storage plants that can meet the demands of Hawaii's future electrical demands. 3rd, that they start to decommission older inefficient power generation plants. HECO needs to transition from a power production mode and move toward smart grid power management for a more efficient and enviromentally friendly utility of the future,

Sincerely Ron & Jan Hayashi

Aloha.

We need your help to ensure that *everyone* can enjoy the benefits of rooftop solar in the future. This bill will do that. Our high energy bills are killing jobs and businesses in Hawaii . The utility companies want this to continue. Your constituents do not. We need a sustainable future. Please vote in support of this bill

Best,

Emma White, JD, MA

67 Meheu Circle

Kahului, HI 96732

Aloha legislators,

I support SB 2656. We need to make it easy for people to install solar panels.

Doug Fox

Honaunau, HI

328-1237

Aloha Senator Mike Gabbard and Senator Rosalyn Baker and Members of the Committees on Energy and Environment and Commerce and Consumer Affairs.

I am in strong support of SB2656, which would improve accessibility for all Hawaii residents to connect to Hawaii's electrical system. This bill will move Hawaii towards greater energy sustainability.

Our family has lived in Manoa since 1985. We are finally in a position to install solar but are blocked from connecting with Hawaiian Electric due to their claim that the Manoa area has already reached "100%" saturation. This bill would enable us to proceed with installing solar so that we can contribute to lowering the island's carbon footprint. It would also lower our energy bill, which would be enable us to continue to pay our electric bill and stay in our home during retirement.

Thank you for the opportunity to testify.

Your sincerely

Ralph and Therese Argoud Wheelock
3314 Woodlawn Dr.
Honolulu, Hawaii 96822

SB 2656

- I support giving people the right to solar. Since 2009, the average residential rate have gone up by more than 50%!
- People should have the ability to pursue cleaner and cheaper options.
- Solar has been a major, sustainable economic engine for Hawaii. As of 2012, it accounted for 28% of all construction expenditures in the state.
- HECO has repeatedly failed to demonstrate a plan for growth of innovative technologies. The PUC needs to chart a way forward on grid modernization that is fair and efficient for everyone.
- Our fossil fuels are running out and by changing to rooftop solar families can have electricity they can afford. This also helps HECO by not having them have to expand their facilities.

Randy C. Horne
(808) 936-3686
randy@picturethisgraphics.com



SB 2656

Aloha

We have HELCO and if you want an inefficient infrastructure, you've found it. All we need is a wind to knock out our power, albeit for a short while, but if really needed power for something, you simply say a few choice words about them and go on with your life. There are those who consider themselves prisoners of HELCO. I'm told when there is a power outage in Hilo, they are right on it, day or night, but in the hinterlands, you may have a few hours, especially if lightning hit a transformer, or something equally as enjoyable. If two thirds of our bill is for infrastructure and a few solar panels will overload the system, the problem lies with the provider, as the other suppliers can adjust theirs to that. Instead of large, monopolistic corporations, what we need are smaller, mini and even micro grids controlled by local communities. I'll take rooftop solar, wind (vertical axis wind turbines have had a lot of private research) and if I can work with a friend who understands how to obtain power from the planetary electromagnetic field, I'll get it that way and go completely off grid, as we should be able to generate our own power. If they cannot withstand the competition, then they should not be in business. I support SB2656. A HELCO tree cutting blunder put Lower Puna at risk for a while after a tree trimming accident disabled a PGV line. It wouldn't have been a problem if HELCO's system hadn't misinterpreted this and cut the redundant line, forcing PGV to shut down, and release a lot of H2S along with other gasses from deep in the bowels of the earth. If the Geothermal facility had a large holding tank to accommodate such contingencies, the community would not have been put at risk by the computer assisted, tree cutting fiasco. Their shutdown was a "by the book" example, but never the less, instances like that are reasons there are those who would rather supply their own power.

Mahalo for reading this,
Dave Kisor
14-3444 Tutu Ln.,
Pahoa, HI. 96778

Aloha Senate Committee on Energy and Environment,

We have owned and lived on Molokai for the last 13 years. Moving here was the best decision we made. As you know living at the end of the road literally and figuratively has it's challenges. The frequent power surges and lack of reliability of power is a constant not to mention the highest rates in the country.

It is all worth it to be able to live here but improved efficiency and lower cost would greatly enhance our lives and provide new good paying jobs to our sagging island economy. Please support SB2933. Mahalo for all that you do for us.

George P Barbour
PO Box 319
Maunaloa, HI
96770
8085522429
Georgepbarbour@gmail.com

SB 2656

Dear members of the Senate Committees on Energy and Environment and Consumer Protection,

My name is Aaron Isgar and I am a resident of Kalama Valley. Last year, I installed solar panels on my home and have since been benefiting from reduced long-term electricity costs. I am also pleased to be reducing the amount of pollution caused by the consumption of fossil fuels.

I have been dismayed in recent months by the brakes that HECO has applied to solar installation projects. HECO had plenty of time to prepare for the inevitable popularization of private solar installations at homes and businesses. The company has either been negligent or is willfully slowing down the further expansion of decentralized power generation. The people should not be penalized for the failures of a highly-profitable public utility.

Please support the passage of SB 2656 as one step toward ensuring the right of private citizens to install and utilize solar power generation.

Sincerely,
Aaron Isgar
Kalama Valley

My electric bill is often over \$300 per month and I have solar water. I can't imagine a higher bill than this . No one I know on the mainland has a bill this high and they use air conditioning and heating. We need any chance we can have to change this monopoly in Hawaii and make it affordable to live here . Thanks for supporting this bill. Aloha, Karen Brandon

I am in support of SB 2656. The people need to be able to install PV as a viable option for the ever increasing cost of electricity. This will contribute to the future sustainability of Hawaii to get off the dependency of fossil fuels.

Mahalo,

Ron Iwami
Homeowner Manoa Valley

SB2656

Submitted on: 2/1/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Joyce Chun	Individual	Support	No

SB2656

Submitted on: 2/1/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Roger Tayasu	Individual	Support	No

SB2656

Submitted on: 2/1/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

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

Comments: Please support this important bill for the people, not corporate greed.

SB2656

Submitted on: 2/1/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

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

SB2656

Submitted on: 2/1/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Joseph Lui	Individual	Support	No

SB2656

Submitted on: 2/1/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Keri Zacher	Individual	Support	No

SB2656

Submitted on: 2/1/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Ronald K. Mulligan	Individual	Support	No

Aloha!

It's time to take control from our local electric utilities and begin a grid modernization and establish a policy allowing people to interconnect to the grid easier than currently possible.

HECO and HELCO has repeatedly failed to demonstrate a plan for growth of innovative technologies. The PUC needs to chart a way forward on grid modernization that is fair and efficient for EVERYONE!!

Mahalo for your consideration!

Marjorie Erway
PO BOx 2807
Kailua Kona, HI 96745
324-4624

HECO has GOT to make solar a viable source of electricity for our state. How irresponsible of HECO!
Maryann Gianantoni

SB2656

Submitted on: 2/2/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Joseph Serna	Individual	Support	No

Comments: The Hawaii Electrical Grid is in serious need of modernization to keep pace with our islands growth and move toward efficiency. It is apparent that Hawaii electric companies have not kept pace with current trends and technologies to enable the electrical grid to fully support alternative energy that benefit us all. The prices continually rise (supposedly to cover higher fuel costs) but, never retreat. Since the Electric Companies do not want do the right thing and invest in he future of a stable and sustainable electrical grid Hawaii then I believe the Hawaii State Government should require the Public Utility Commission to adopt rules for improved access of renewable energy onto the grid. This legislation is vital in our State's goals of sustainability and reduction of our reliance on imported fossil fuels. Our islands continue to grow and expand however, our electrical systems have remained a stagnant and inflexible. The Electric companies are mired in a constant state of red tape, bureaucracy and inefficiency. It is time for the State Government to step in and do what is right.

SB2656

Submitted on: 2/2/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Calvin K. Yamane	Individual	Support	No

SB2656

Submitted on: 2/2/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
george shishido	Individual	Support	No

Comments: Comments: The Hawaii Electrical Grid is in serious need of modernization to keep pace with our islands growth and move toward efficiency. It is apparent that Hawaii electric companies have not kept pace with current trends and technologies to enable the electrical grid to fully support alternative energy that benefits us all. The prices continually rise (supposedly to cover higher fuel costs) but, never retreat. Since the Electric Companies do not want to do the right thing, and invest in the future of a stable and sustainable electrical grid for Hawaii, then I believe the Hawaii State Government should require the Public Utility Commission to adopt rules for improved access of renewable energy onto the grid. This legislation is vital in our State's goals of sustainability and reduction of our reliance on imported fossil fuels. Our islands continue to grow and expand, however our electrical systems have remained stagnant and inflexible. The Electric companies are mired in a constant state of red tape, bureaucracy and inefficiency. It is time for the State Government to step in and do what is right!

SB2656

Submitted on: 2/2/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

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

SB2656

Submitted on: 2/2/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Wendy Hiraoka	Individual	Support	No

I support SB 2656.

- I support giving people the right to solar.
- People should have the ability to pursue cleaner and cheaper options.
- Solar has been a major, sustainable economic engine for Hawaii. As of 2012, it accounted for 28% of all construction expenditures in the state.
- HECO has repeatedly failed to demonstrate a plan for growth of innovative technologies. The PUC needs to chart a way forward on grid modernization that is fair and efficient for everyone.
- I care about rooftop solar, we live in a democracy and individuals need to have the freedom to decide how they manage their own finances.
- HECO should not be dictating policy.
- You are the peoples representatives please support SB 2656.

I see Solar as the most effective way our economy as a state can grow and benefit everyone not just the executives and stock holders in utility companies.

Please vote for bill SB 2656.

Thank you,

Michael Donenfeld
Hilo Hawaii

SB2656

Submitted on: 2/2/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
'Anela Lani Grace Belegaud	Individual	Support	No

Comments: My name is 'Ānela Lani Grace Belegaud and am in support of SB2656 on the behalf of relatives who live in the new suburban area of Ewa Beach. I am very proud and happy for my relatives who purchased and now live in a beautiful new Ewa Beach home; however, for the comfort of a large family of 7 plus, they tend to use the air conditioning 24 hours, and seven days a week. Thus, I was relieved and excited to hear that they had gotten a loan to purchase the extremely expensive solar panels. This excitement did not last to long because at this moment they are unable to use the solar panels since HECO's grid is supposedly "overly saturated!" Shame on both of you, HECO, and the PUC for putting my relatives in such a dire financial situation. The cost of living is high enough as it is, and as a new homeowner burdened with high mortgage payments, my relatives are now stuck with monthly loan payments of unused expensive solar panels. There is still hope if the PUC can force grid modernization that is fair and efficient for everyone since HECO fails to do so. Thank you for the opportunity to give testimony in support of SB2656.

SB2656

Submitted on: 2/2/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Luana Jones	Individual	Support	No

Comments: Please pass this bill... it is definitely in the best interest of the public now, and the economic stability of the future.

SB2656

Submitted on: 2/2/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Rane Mulligan	Individual	Support	No

Aloha,

I hereby testify my support to Bill SB 2656.

Here are some reasons why:

I support giving people the right to solar. Since 2009, the average residential rate have gone up by more than 50%! People should have the ability to pursue cleaner and cheaper options!!

- Solar has been a major, sustainable economic engine for Hawaii. As of 2012, it accounted for 28% of all construction expenditures in the state.
- HECO has repeatedly failed to demonstrate a plan for growth of innovative technologies. The PUC needs to chart a way forward on grid modernization that is fair and efficient for everyone!
- Let Hawaii be a positive example to the rest of the world in how to create sustaneable living conditions that support our island and planet rather than deplete her. NOW is the time to do this!
- Take responsibility and do your part!

Sincerely,

Pia Jacobsson

SB2656

Submitted on: 2/2/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Steven Hoo	Individual	Support	No

Testimony of Support for SB 2656

To Whom It May Concern,

It is my observation that Hawaii's energy industry is at perhaps its most critical point in history in terms of the drive, awareness and resources available from all the major stakeholders (consumers, technology innovators and integrators, utilities, & government) to define a better energy future for our state. SB 2656 fulfills a critical piece in the continuance of the momentum built in this movement, and will help prevent further polarization of consumers & integrators against their utility & utility oversight. Hawaii's energy future will be much brighter with all stakeholders working collaboratively towards the achieving and surpassing of established energy goals and will position Hawaii as a shining star of the global energy realm. Without the developments defined in SB 2656, such collaboration will be stifled, and will likely result in stakeholders working against each other rather than with each other, and will make the achieving of the state's goals a painful, dividing, and scarring process that will be a "black eye" for the state's example to the world.

As such, I strongly encourage your support for SB 2656, as such will be a display of support for shaping a stronger, brighter future for our beloved islands and those who will follow our example!

Aloha,

Josh Mason



House committee on S.B. 2656

Hello house committee, my name is Daniel Aiu and I am for passing this bill. I have worked in the Solar industry for almost 8 years and have seen the tremendous growth. I am currently the Regional Manager in the State of Hawaii, and a licensed electrician. Over the past 8 years I have seen the state of Hawaii go from a few installs a month to hundreds of companies installing many jobs a day, the utility go from being nonexistent to overly engaged. I think it is amazing how we as a state have become the best user of solar per capital, and we have not even come close to how much more we can achieve. I am not saying that the HECO does not have some real concerns on their end that they need to update to ensure the safety of the grid, but I would like for them to stick to some real timelines and show some kind of urgency and understanding for both the customers looking to go solar and save some money, and the industry which employs so many residents here in Hawaii. I believe this bill will help to enforce these concerns, which will ultimately help homeowners and business to plan and survive. Thank you for your time and please pass this bill. Thanks you

Daniel Aiu

SB2656

Submitted on: 2/3/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Kyle Funasaki	Individual	Support	No

SB2656

Submitted on: 2/3/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Judy Seyler	Individual	Support	No

SB2656

Submitted on: 2/3/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Christopher Chinn	Individual	Support	No

I deserve the right to choose to install an energy system that will benefit not only the environment, but also my family's well being too. I have dutifully paid my HECO every month. However, with the price of oil fluctuating so goes my electric bill as well. I am a single with a fixed income. I have been looking into pvc systems but could not find the right company until recently. With the help of SolarCity, I know I can handle my finances better knowing I will have a consistent electric bill and pay off some of the loans I've had to borrow to keep my family afloat.

I am in support of SB 2656 unless HECO can come up with a better solution...say nuclear power? Oh but what about the nuclear spills? It has been years since that has happened and the technology gets better every year. Why not use that as a form of energy if you all are afraid of pvc systems? Something to think about.

Jolyn Jardiolin

SB2656

Submitted on: 2/3/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
kurt ishihara	Individual	Support	No

SB2656

Submitted on: 2/3/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Tracy Keliioomaluu	Individual	Support	No

Sir/Madam,

I should have my solar panels on my roof of my Kaneohe Bay home. That said they were to have been installed in early December 2013. That date has now slipped to Late April 2014. All permits have been acquired as of November 2013. I continue to wait on HECO and what they are going to do. Appreciate if you can push HECO to put in the necessary infrastructure they need (and should have done years ago). They are after all making money by selling excess electricity!

Regards,

Robert L Comper
44-652B Kaneohe Bay Drive
Kaneohe, Hawaii 96744
Cell: 916.337.5618

To whom it may concern:

I would like to submit my testimony in support of SB2656.

My name is Jonelle Rezantes and I am the single mother of 2 sons. I am also a independant commission only sales representative at Hawaii Energy Connection (Kumu Kit).

Each day I meet with homeowners and show them the features and benefits of purchasing a photovoltaic system for their home.

Prior to HECO's decision to limit PV Solar Inter-Connections back in September my job was challenging but I was still able to successfully sell systems to homeowners and make enough money to pay my mortgage, take care of my children and pay my taxes.

Since September my sales have dropped dramatically. I still meet with a number of homeowners each day but unfortunately I have to explain to the majority of them that they will not be able to install a system at this time and will need to wait for HECO to determine when they will be able to get a system on their home. My customers are extremely frustrated, they are still signing up to purchase systems but have been put into this waiting period with no answers as to when they can move forward.

As for me, since I do not get paid until a system is installed I am continuing to do my job each day with no idea of when I will get paid for the majority of systems I am selling. This has obviously put a great strain on my ability to take care of my family and have any sense of how to plan going forward.

There is no lack of customers who want a PV system, just a lack of willingness on HECO's part to allow them to connect.

Customers are angry with HECO and express their frustration to me on a daily basis. They want something done so that they can move forward and offset the high cost of electricity that we all pay for each month.

Please vote yes on SB2656 and allow us to continue transforming Hawaii into the leader in Clean Energy Solutions for years to come.

Sincerely,

Jonelle Rezantes

46-1058 Emepela Way #10A

Kaneohe, Hawaii 96744

(808) 271-8897

SB2656

Submitted on: 2/3/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
pamela barros	Individual	Support	No

SB2656

Submitted on: 2/3/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
CECE SANCHEZ	Individual	Support	No

SB2656

Submitted on: 2/3/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Joe Cardiello	Individual	Support	No

SB 2656

Dear Senate Committee,

My name is Lionel Ahina, and I've been in the solar industry on Oahu for the past six years. I remember when Governor Lingle passed the Clean Energy Act or law that Hawaii should be about 30% in renewable energy by a certain time frame. We as a State was heading in that direction until HECO put the screeching halt on installing PV systems because of the "interconnecting review of 100% penetrating grid capacity areas."

About two or three years ago Maui and the Big Island had this exact same issue. HECO has had all this time to address and correct this issue and upgrade their infrastructure here on Oahu. It seems that they were not proactive or had a hidden agenda and did nothing to address an issue they were well aware of (damaging the existing grid because of the surge of PV electricity that was overwhelming the existing grid capacity).

HECO's mandate, "no install for up to 6 months" of PV systems has our Clean Energy goals thrown right out the window. Our electric utility company did not adhere to the vision, that our elected government law makers had set in place, to reduce us from high kilowatt hour rates because of the dependency of crude oil. This decision is crippling the solar industry here in Hawaii and casting the seeds of doubt into the minds of potential solar customers as to feasibility of installing an alternative energy source. When a utility company's decision has the effect of regulating an

alternative energy source (its competitor) that decision needs a much closer look.

Many of my homeowners are so frustrated because of this that they give me their opinion that HECO is conspiring to slow down the solar industry here in Hawaii because of lost revenue caused by those homeowners who have installed PV systems. They feel HECO is deliberately derailing our alternative energy goals by attempting to retain profits at the expense of those homeowners who have chosen to install an alternative energy source to become self sufficient and less dependent on HECO. Many homeowners express anger and frustration and feel our legislators are more concerned with the profitability of HECO over fulfilling the promises made by the legislature to its constituents to achieve our clean energy goals.

My homeowners are also confused by HECO's statement that homeowners will have to pay for the equipment upgrade cost. HECO is the utility company they should pay for this cost or the PUC should address this concern understanding that these additional charges to the homeowners will be counter productive in reaching our clean energy goals. Homeowners will be put in the position making the installation of solar less attractive to them. Many homeowners view this charge as a "penalty for doing the right thing" (installing a clean energy device on their home.)

The Star Advertiser had articles that said HECO is closing power plants because PV systems are generating more

electricity that the old power plants are not needed anymore. Also no new power plants are needed to make up the increase demand for electricity. HECO is saving ten's if not hundred's of millions of dollars by not building these future power plants. This savings should be factored in to the "equipment upgrade cost" that they want to impose on the homeowners.

Our company has laid off twelve installers who are now collecting unemployment. Our electrical contractor has laid off his workers. Our roofer has laid off some of his employee's because of this. This has is a domino effect like a stone thrown into a pond that the ripples have affected the entire fragile construction economic industry.

Mahalo,
Lionel Ahina
Manager
Solar Help Hawaii
808-222-4747

SB2656

Submitted on: 2/3/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Scott Sand	Individual	Support	No

SB2656

Submitted on: 2/3/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
William Mason	Individual	Support	No

Comments: Grid improvements to accommodate more alternate energy are essential. The feeders that have reached the 100%+ DML on a first come, first serve basis has already separated those who were able to connect and those who now cannot connect into the haves and have nots. Customers who can afford to purchase a system should be able to!

SB2656

Submitted on: 2/3/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Ray Heitzman	Individual	Support	No

Comments: I am an independent solar contractor and this bill would greatly help my business right now we are 30 to 40% off of the year before. We need to come up with a viable solution so that P.V. Can be installed by all homeowners who want it.

I support SB2656, Solar tax credits and rebates and I would like Hawaii to be the first state to stop burning fossil fuels. I own HECO stock because they said this was their goal as well. Did they lie? A little spending on infrastructure and they could reap the benefits of buying rooftop solar power for pennies on the dollar. Sincerely, Laura Gray

SB 2656

Being in the industry, I will speak in behalf of the many homeowners who are very unhappy with how Heco is handling the situation with the grid saturation concern. Because Heco has a monopoly in Hawaii, they have little concern that an unhappy customer will run to another utility company. As a result, there are a lot of long delays that are preventing homeowners from switching to clean and renewable energy that would of been avoidable if more cooperative planning took place.

We need our state representatives and officials to better guide the PUC and the utility company in the interest of local residents who are locked to a monopolized utility company. With no other utility company company to run to, local residents are disempowered. This is when our state representatives are needed most, to guide the PUC and HECO towards what is best for our people and our local economy.

The Federal Tax credit for renewable energy is scheduled to expire in 2016. We need urgency on our part while the tax credit is available. If we allow HECO to move at their schedule, resolutions will be made after the Fed Tax credit expires and that would be too late for many people.

Sid Villaflor
224-8613

SB2656

Submitted on: 2/3/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Michelle McGuinness	Individual	Support	No

SB2656

Submitted on: 2/3/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Richard M Kaneshiro	Individual	Support	Yes

SB 2656


Hawaii has the greatest opportunity to set the example for all that we can learn to live green and a great part of this is by harnessing the sun's energy. For many years we have talked the talk about the importance of solar power. And now that our population is taking steps to harness that power, HECO is creating roadblock after roadblock to our achieving this. I had my Solar PV installed last summer and it took approximately 4 months before HECO could have someone come out to install a net meter and approve my system. This makes no sense to me. How can Hawaii be expected to set an example without the support of our electric company. HECO knew this was on the horizon for many years and should have been prepared to take the steps necessary to ensure we would be ready to roll forward without the continuous and costly delays. I am now trying to have Solar PV installed on my second home, and this time it has taken many months merely to obtain HECO's approval to install the system. THIS IS JUST NOT ACCEPTABLE.

With warmest aloha,



Sue Alden (RA)
GRI, SFR, ABR, AHWD, e-PRO
2011, 2012, 2013 Aloha Aina Award Nominee
Hawaii Real Estate Online
Kailua , HI 96734
Honolulu Board of Realtors
Windward Regional Chairperson
Email: suealden@gmail.com
Cell: 808.392.4523 Fax: 866.320-8851
www.SueAldenRealEstate.com

If you no longer wish to receive emails from me, please reply with "Quit" in the subject line.

 *Think Green. Please consider the environment before printing this email.*

Honorable Senators:

My name is Gayle Nakama and I am submitting written testimony in support of SB 2656 requiring Hawaiian Electric Company to modernize the current grid system to allow more people to obtain solar. Let me tell you how solar has impacted my life.

The decision to go solar was not without a lot of thought and consideration. After considering solar, I opted to go with a solar lease. The program allowed me to get solar without the upfront loan process and a fixed cost for 20 years. The savings were instant; I could relax and not worry at all. Cost for electricity is predictable and stable for 20 years, how can I go wrong?

I am a disabled retiree, living on a meager income. With my savings on solar, I am able to send my grandson, a freshman at Pacific University in Oregon, the sum of \$100.00 per month towards his living expenses there. This was an amount that I could not afford had it not been for my rooftop solar system. It feels good to be able to contribute a meager sum to my grandson.

For one year prior to Tyler's graduation, I was able to save \$100.00 per month and this sum allowed me to attend his graduation in Bellevue, Washington in June of 2013. Watching Tyler graduate was a moment that I longed for since he was born, a memory of a lifetime! This would not have been possible had it not been for the savings in electricity.

Hawaii has the highest cost in the nation for electricity costs, I shudder to think people may soon people may be faced with the challenge of paying for their electricity or buying food, a reality that may not impact each of you, but may impact your districts and the people that you serve. This is the harsh reality of our long standing high electricity costs and the fact that the state will soon face a crisis if this bill does not pass.

Hawaii is also facing the fact that our precious 'aina can no longer support most of our infrastructure without laws that direct people to conserve and save. One issue is that, Hawaii, as a state in the middle of a vast ocean, must reduce our dependence on foreign oil imports. The requirement that would require HECO to upgrade and modernize our electrical grid system will do just that and contribute towards the overall downgrade of dependency on foreign oil imports.

FACT: it is also well known that approximately 1 in ten households are able to obtain solar due to the present grid system. Please help the remaining nine? This bill will make it possible to go solar and experience clean, affordable energy, like me.

Aloha State Officials,

My name is Aaron Langford and I work for Bonterra Solar. I started working for the company in 2010. I am the QC manager and have help build the sales division as well for our company. I love what I do and take a lot of pride in my job and the opportunity I have had to provide solar energy as well as a cleaner life style for all of our customers.

Before entering the solar industry I was a Mason Contractor here in Hawaii. In 2009 I fractured my back on the job and struggled to keep everything afloat. Knowing I needed to make a big career change to stay healthy and to continue to provide for my family, I made the switch to Solar and joined the Bonterra Solar team. After the first year, I told my wife that it was the best decision I have ever made.

Things have been relatively stable for my family the last few years. We have been able to dig our selves out of some debt that had accumulated while I was injured and owning my own company. I personally have been having the feeling of success, being able to provide for my family. Little did I know it would all change for the worse on Sept. 7 2013, when HECO dropped the bomb on the solar industry.

At first we thought it was just a formality that HECO had to implement for safety purposes. But as time went on, it was clear HECO had other motivations to restrict consumers from going solar.

Our company reported back to us the sense of confidence that we would be one of the companies that would be ok and would make it through this speed bump with little casualties. But 3rd and 4th quarters of 2013 proved to be devastating with few sales and even fewer installs completed. In a time of the year that usually proved to be the strongest times of the year for our industry we were stuck in the doldrums.

Last week I received notice that my company has no choice but to let me go as of february 15th. With such short notice, I am stressed to say the least, that I will not be able to provide for my family for the first time ever. I am looking at having to collect unemployment until I find a new job, which I have never had to do before either and do not care to! This means that because of HECO's decision making, the State and Federal government (tax payers like myself) will now have

to fork out the costs of those benefits for me and my family. How do you feel about that? Do you think this is fair?

The kicker is, I don't even have solar on my house yet and have to pay HECO every month for our energy consumption. The same company who is dictating our very survival in this industry, not to mention my lively hood.

My family and I would appreciate it if you could pass this bill HB 1943--as soon as possible. I would like nothing else but to be able to keep my job and continue to provide for my family. Not to mention to be able to help our State reach our energy initiative goals by 2030.

Seriously stressed and concerned,

Aaron Langford
QC Manager
808-383-7611 - cell
Bonterra Solar
4218 Waialae Ave. #203
Honolulu, HI 96816
(808)548-7657 (office)
(808)440-9649(fax)
www.bonterrasolar.com

Testimony to: **SB 2656 "Relating to the modernization of the Hawaii electric system"**

http://www.capitol.hawaii.gov/session2014/bills/SB2656_.HTM

Introduced by: Gabbard, Chun, Oakland, English, Espero, Galuteria, Ihara, Kahele, Ruderman, Solomon
Committee: ENE/CPN. Room: 225. Date/Time: Feb.4, 2014 / 2:45 pm

From: Ulrich Bonne, ulrichbonne@msn.com, permanent resident of Kailua-Kona, HI 96740, 808-324-0108

Representing: **Self**. Position: **Support, with amendments**. Testify in person: **No**

The purpose of SB 2656 is to facilitate and expedite the availability of grid-tied solar PV for any home or business that wants it, regardless of whether it is self-, publicly- or utility-financed. I SUPPORT that intent, but I believe that additional, more urgent action is needed, than the proposed long time-line, drawn-out PUC studies, their report(s) (20 days before the 2016 session) and uncertain implementation. To better serve the public's interest we have available solutions now, which can be implemented now, such as PV systems which are designed to store excess noon-time energy on-site for use in the evening, rather than inject it into the grid. Such solutions also provide on-site power during grid outages.

One such system is a Low Grid-Load PV system with Battery Backup (LGLPVBB), which is grid-tied (to benefit from having the grid as a secondary backup). It does, therefore, not need an on-site engine generator. It meets minimum Self-Consumption* levels, as described in the Appendix, thereby operating in a manner that is similar to the off-grid PVBB systems (especially during grid outages), which many homes have used for over 3 decades in Hawaii and elsewhere. Such on-site storage has lower transmission losses and appears to be of lower cost than more distant utility storage.

Today's utility retail price of mostly over 40 ¢/kWh in Hawaii is heading towards an estimated 30-year-levelized life-cycle cost (LLCC) of over 85 ¢/kWh, while the individual LLCCs for LGLPVBBs are dropping to the 16 ¢/kWh range and plain PVs to the 9 ¢/kWh range (before accounting for the MMC (Minimum Monthly Charge) now equivalent to about 4 ¢/kWh), but including subsidies. Therefore, I believe **SB 2656 should be amended** specifically and immediately:

- (A) Ask the PUC to publish accepted and utility-approved LGLPVBB configurations and guidelines by mid-2014. These are intended for the future benefit of both educating the public and installers as well as reducing the burden of the utilities' permitting process – but should not delay the continued installation of already available LGLPVBBs[2].
- (B) Set hook-up or interconnection fees for new homes with LGLPVBBs to be no higher than for new homes without any PVs – provided that the LGLPVBBs meet the minimum Self-Consumption* guidelines detailed in the Appendix, and
- (C) Recognize that the Minimum Monthly Charge (MMC) should be tiered to distinguish between plain PVs (which collectively may cause grid overload), lower MMCs for LGLPVBBs with NEM contracts and the lowest MMCs for LGLPVBBs without NEM contracts.

Rationale: Because LGLPVBBs cause even much less load on the grid than regular customers without PVs, and certainly much less load than plain PV systems (i.e. PVs without on-site storage), their permitting process should be expedited, their deployment promoted and their low-grid load recognized by means of a lower MMC, which fairly reflects their low grid load. Knowing that grid (transmission and distribution) capital and maintenance expenses amount to about 1 ¢/kWh, a fair MMC for average residential ratepayers using 500 kWh/month may be 5 \$/month[1], regardless of whether explicitly or implicitly included in the retail rate, and regardless of whether any of that energy is used or not at all. However, plain PVs force installation of grid storage, at an added cost of about 5 to 6 ¢/kWh, so that the present MMC of 20.5 \$/month may already cover the added utility expense, as benchmarked against other utilities[1]. I rather pay a little more (~30%) for having electricity storage on-site (as insurance for lighting, refrigeration, irrigation, ... and EV charging) and avoid the effect of grid outages. Remember too the nice feature of a NEM contract: Its kWh credits are independent of the \$/kWh.

References

- [1] U.Bonne, "Arizona PUC decision to allow a \$0.70/month/kW or about \$5 monthly charge to PV owners," 19 Nov. 2013, <http://alohafuels.pbworks.com/f/PB-13-MMC.pdf>
- [2] PVBB configurations designed to not inject energy into the grid, such as "PVBB Appliances," would not require permits, and their 30-year LLCC "penalty" for operating without a NEM contract is less than 2 ¢/kWh, as detailed in ref.[3]
- [3] U.Bonne, "Life-cycle cost of PVBB systems, depending on their grid-tie type," 1 June 2013, <http://alohafuels.pbworks.com/f/PB-13-PVBB-LCC-Grid.pdf>

APPENDIX

Minimum grid load (and even peak-demand shifting) or maximum PV Self-Consumption* is achieved if:

- (1) The size of the on-site battery is large enough to store the average energy needed for the home or business during the no-sun hours. For Hawaii residents with a solar Capacity Factor near 0.17**, the battery size may range from 2 to 2.5 hours' worth of peak PV output power, for a PV that can provide for the annual average home load. In locations with half of the above Capacity Factor, a battery size worth 1-1.3 hours may be sufficient to store the peak energy output of a correspondingly larger PV.
 - (2) We allow only PV energy and no grid energy to charge the on-site batteries during the day, and
 - (3) Grid energy is used for the home or business only if there is no available energy left in the "active" part of the battery
- Having monitored my own PV output for the past 4 years in Kailua-Kona at ~ 400-ft elevation, I was surprised but pleased that my day-to-day 2-kW PV output did not fluctuate by more than about +/-50% (peak-to-peak) of the 4-year average of 9 kWh/day. This dispels the concern that little or no output is produced by PVs during cloudy days and might cause a correspondingly inordinate fluctuation on grid demand. I have been able to verify such low peak-to-peak variability at one other location near Waimea, with a much lower capacity factor.

* Self-Consumption = (PV energy used on site) / (Total PV energy generated), which should be > 0.8 for LGLPVBBs

** Capacity Factor = Average fraction of a 24-hour period, during which the PV generates peak output

To Whom It May Concern:

My name is Richard Farawell, I have lived in Hawaii since 1979. Although not born here, after living all over the mainland, from as far north as Chicago and Philadelphia, south as far as Florida, east as far as Norfolk Virginia and west as far as San Diego, California, my wife and I decided, over 30 years ago, to settle down and raise our family here in this beautiful state.

I mention my history because as one that has made the choice to live here, I realize and accept the fact that it can be rather expensive compared to other areas of our country. We do have some choices such as where we shop, in order to keep to our budgets. There are, however, many areas we have little, if any choice. Such as: the fees for water and sewage and car registration. Up until recently we also had no choice for the continuing increasing rate of electric power to our homes.

We now have a choice regarding our electric utility and it seems the right of the people to exercise that choice is in jeopardy. While many accusations and much speculation has circulated about the sudden concern for safety on the part of HECO, it seems that whatever the situation, the people should not be forced to have our right to choose how we get our electricity stifled by the powerful monopoly of our electric utilities. The people should not be the ones that suffer as a result of this unexpected, supposed crisis. Did HECO not know that it may be a problem at some time in the future? Was the explosion of PV Solar the past few years not noticed by them? Perhaps they hoped the PV boom would go away and they would not have to deal with it? These are perhaps all moot questions as they do not address the present situation. But the situation leaves no doubt that something desperately needs to be done and it needs to be addressed immediately.

I have been in the solar industry since 2008 and there is another angle to this sad state of affairs. Jobs! Yes, the solar companies have suffered as a result of this situation and one may claim that that is the price of doing business. But what about the literally hundreds, perhaps thousands of jobs that have been lost or greatly reduced as a result and the trickle down affect it has on all aspects of our society? That may sound dramatic but consider who is affected when over a quarter of the construction industry is suddenly, without warning, put on hold? Rent, mortgages and other bills are barely covered by unemployment compensation. That leaves little, if any, for other expenditures. Literally every business in Hawaii has been affected as a large percentage of their customers are suddenly in financial harm's way.

I am not against big business as it creates the jobs that drive our economy. HECO is, in a matter of speaking, a big business that employs many. The solar industry is also a booming industry that helped keep the construction industry afloat the past few years of economic crisis. We need to work together and it needs to be done now. The Legislature and the PUC need to do their job protecting and representing the people. The law makers need to decide who they are concerned with: the constituents that elected them to their positions or not.

Thank you for your kind attention to this matter,

Richard H Farawell

SB2656

Submitted on: 2/3/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Keely Bruns	Individual	Support	No

SB2656

Submitted on: 2/3/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Ninu-Alexandri Quirk, MD	Individual	Support	No

Comments: People have the right to rooftop solar. It is essential in times of emergency - after earthquakes and tsunamis people with rooftop solar still have power, when everyone dependent on the grid has none. Also, we need to move Hawaii into the 21st Century by encouraging CLEAN ENERGY and decreasing our dependence on a centralized grid.

SB2656

Submitted on: 2/3/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Brigitte Abbot	Individual	Support	No

SB2656

Submitted on: 2/3/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Jade Plandor	Individual	Support	No

SB 2656

My name is Claudia Torres and I support giving the people the right to solar. Honestly, I don't know why we are even having this "conversation". Don't we have the right to install solar so that we can take advantage of the sun that we boast of because we have "the best weather on the planet"? I thought our state was going to lead the way when it came to being "green"? Isn't solar part of our be "green" effort and this is to help us move away from our dependence on oil?

Our state should not allow a utility company to dictate who can and who cannot have solar. The people, your constituents, should have the ability to pursue cleaner and cheaper options. HECO has had ample time to prepare for this movement towards solar energy and their failure or unwillingness to prepare for this is unconscionable.

As you may or not be aware, getting solar is not something you can decide by waking up one morning and say, "Gee, I'll think I'll call up The Solar Guy Company and have solar installed". It takes a lot of time and planning, getting the funding in place, interviewing various solar companies, having your roof checked to be sure there are no issues that need to be addressed before solar is installed, etc. After going through all of this, then you find out that it's on hold? Really? Yes, really. This happened to my daughter, which we pushed to get solar so that they can pay for the additional cost of educating their two children. She went from being elated that finally they can get solar to being in tears because after signing the paperwork to get it started, HECO put a stop on any new solar units.

For years HECO and the various solar companies have been installing solar only to suddenly realize that HECO and the PUC needs to review the grid? The review should have taken place years ago and the saturation point should should have been determined and a plan should have been in place.

SB2656

Submitted on: 2/3/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
ROJELIO HERRERA JR.	Individual	Support	Yes

Comments: I will speak in strong support of this bill.

To Whom it May Concern:

My name is Roy Skaggs and I am a Project Developer at Alternate Energy. I have been involved in Renewable Energy for 2 years now and have thoroughly enjoyed helping people become energy efficient and at the same time saving the environment.

Last September, the island's only utility (better known as a monopoly) tried to completely shut down the PV industry. Under the premise of "safety", they have taken away hard working people's jobs and customer's rights to save money and become independent. There is no rhyme or reason to how they have been approving folks to go ahead and get PV. The only thing for sure is, they don't want ANYONE to move forward until they get permission from HECO first. How is this allowed? I have multiple customers who were supposed to be "grandfathered" that HECO is telling "NO" to again! Do they understand the meaning of grandfathering? We consider the people we work with customers and provide service with a smile. HECO could learn about that treatment instead of looking at everyone only as a ratepayer with no other choice.

The rates in Hawaii are the highest in the country. They have gone up over 50% in less than 5 years! When good, honest, hard-working families are struggling to pay these rates, we should be doing everything to help them. Photo-voltaic has done that for thousands of families. There are thousands more who have been wanting to do it and have either been told "NO" by HECO or to "Wait" with no true timetables.

What about all the lost jobs? 28% of the construction industry is attributed to solar. Hundreds of families have now been affected by the layoffs. This weighs not only on those families futures, but also on the taxpayers as many people will go on unemployment. One thing is for sure, there are thousands of voters watching what happens next.

I keep racking my brain trying to figure out how a for-profit monopoly is able to stop people from capturing the sun on their own rooftops to supply themselves electricity? HECO will tell you because of "safety", but have they actually shown anyone proof of this imminent threat? Scott Seu admitted there are grids that are over 200% DML, so where are all the explosions, accidents, injuries, etc? How is it that HECO is not being held responsible for maintaining and upgrading these grids over the years? They admitted that they knew about this for a long time.

I hope to continue working in this industry helping families, the environment, and providing for my own family. We are all looking for answers and HECO has been left seemingly unchecked so far. We all hope to get answers and move towards an energy efficient Hawaii.

Thank you for accepting my testimony and I will see you tomorrow.

Roy Skaggs

Roy Skaggs

Project Developer

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Email roy@alternateenergyhawaii.com | Web www.alternateenergyhawaii.com

Hello,

My name is Kathryn Troyan, and I am an office administrator for Alternate Energy Inc. I work directly with customers and HECO to process net metering agreements on a daily basis. I am emailing my written testimony in support of SB2656.

"I don't know."

This is the embarrassing response I have been giving many of our customers for the past 5 months when they ask:

"When do you think HECO will approve our NEM?"

"Why did our neighbors already get their NEM approved, when they signed up 3 months after us?"

"Why did HECO install my net meter if they don't want me to install my PV yet?"

"I'm in a 50-75% DML zone, and my friend is in 100%+, but my friend received approval before I did. Why?"

and

"What did HECO mean by 'grandfathering?'"

As an employee in the solar industry I've become familiar with a wide range of impacts from HECO's sudden September 2013 policy change - huge layoffs, massive drops in sales, growing distrust of the PV industry and contractors, and customer horror stories. But the most frustrating issue to deal with has been trying to explain the logic - or lack thereof - of HECO's methods to our long list of waiting customers.

First we handled the chaos of adapting to the new policies in the weeks after September 6th, given the 0 days advance notice we were given to adjust our process.

Then we tackled an attempt to have our eligible customers "grandfathered" under HECO's pre-Sept. 6 policy, per the announcement in December that we could apply for our customers in transition to have them automatically treated under the pre-Sept. 6 rules.

I spent probably 40 hours or more preparing affidavits for 130 of our customers eligible for the "Transition Plan."

Of those 130 affidavits, 80 were not grandfathered at all, despite their clear eligibility.

I spent January saying "I don't know," to these customers again. And wondering why I took all that time preparing affidavits if HECO's safety concerns prevented acceptance of the NEMs anyway. (Couldn't HECO have provided the same response without all the extra paperwork and delay?)

Through all of this, I am watching for trends, hints at timeframes, or patterns of updates that may indicate what our customers can expect... There are none.

Many of our customers who are in 100%+ saturated areas have received approvals. That is great news!

But it raises the question of why many of their neighbors - in the same towns, same streets, and same level of grid saturation - are still waiting.

Some of our customers who were not eligible for grandfathering, but who live in the same areas as customers who are eligible, have received their acceptance already - yet the eligible customers received "rejections" in the same weeks.

I'm not an electrician or an engineer. I don't profess to fully understand the safety concerns that are ostensibly driving HECO's NEM policy. But I am a smart person, and I have not yet found anyone who could explain or give examples of what can actually happen to line workers, customers, or equipment as a result of too much PV generation. I am also smart enough to know that if safety is the real issue, there are surely methods to prevent harm that do not prevent solar installations from proceeding.

I would like to get some real answers for our customers. I think we would all like to keep moving forward in a way that accommodates both grid safety and customers' needs. I am hoping that SB2656 will facilitate the clearer communication and solid deadlines we are all looking for from HECO.

Thank you for accepting my testimony. I look forward to attending the Senate hearing tomorrow for this bill.

Sincerely,

--

Kathryn Troyan

Alternate Energy Inc.

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My name is Robert Justice and my wife and I are residents of a new development in Makakilo. I am here today to testify strongly in favor of SB 2656. When we purchased our home, the builder offered a solar PV system as an option. Unfortunately we still had a house to sell and couldn't manage the additional cost at the time. After selling our former home in late summer, we began researching solar companies and selected one in September. We were aware that we live in a 100% saturation area and of HECO's September moratorium on interconnections in such areas but submitted our NEM agreement in late September 2013 to get in line. HECO confused us and our solar company by switching out our meter and we thought we were ready to go. However, I checked with HECO's NEM department to confirm it and was told that we could not interconnect until we received written approval. We were also told that a study would be finished in the first quarter and that it was not a matter of whether we could connect but when and how much it would cost us for our share of system upgrades. After much discussion we decided to proceed with installation in late December to take advantage of the tax credits this year to help pay for the system. While we are waiting for approval to throw the switch to interconnect, we are paying outrageous electricity bills, contributing to global warming, and burning dirty fossil fuel when we could be using clean solar power for our home and EV. I don't know why HECO wasn't prepared to handle all of PV systems but suspect the reason is related to its bottom line. HECO is a monopoly but hopefully it will do the right thing for the residents of Hawaii.

I strongly agree with all of the points in the bill but would like to emphasize the following:

- Increasing deployment of customer generation in Hawaii is in the public interest, lessening Hawaii's dependence on imported oil, creating thousands of jobs, fostering billions of dollars of economic activity, and giving tens of thousands of households and businesses access to reasonably priced electricity.
- Appropriate investments in energy storage and smart grid improvements are vital to achieve Hawaii's clean energy goals.
- The failure to adequately and sufficiently plan for and implement the modifications necessary to accommodate customers' choices to install customer generation negatively impacts all Hawaii residents.
- All Hawaii residents should have the right to install and interconnect customer generation regardless of the location of their homes and businesses on the Hawaii electric system.
- All Hawaii residents should be allowed to interconnect customer generation to the Hawaii electric system in a timely manner and for a reasonable cost.

My only disappointment with the bill is that the commission has until 20 days prior to the convening of the regular session of 2016 to submit to the legislature a report of its findings and recommendations. How long will it take after that for the legislature to pass any legislation needed to implement those recommendations and for any recommended energy storage and grid upgrades? It will certainly be too late for my wife and me if HECO further delays interconnection or charges an excessive amount for system upgrades. Thank you for listening.

Aloha,

My name is Michael Ito and am Director of Marketing at Alternate Energy Inc. I am emailing my written testimony in support of SB2656.

In 2007 our company had 10 employees, fast forward to SEP 5th 2013, we employed and trained 60 technicians, 12 Electrical Journeymen and Apprentices, 10 Administrators and 5 Engineers.

On JAN 6, this year, we have had to lay off 20 employees because we simply don't have the work to keep them employed. Our sales numbers year to date are down over 100%.

Multiply this by 200+ solar companies on Oahu and we're looking at some serious layoffs and loss in revenue in a short amount of time.

Fast forward again in 2-3 months with no resolution or clarity and we're laying off 20 more (Don't forget about the 200 other solar companies).

According to the Depart of Labor, Hawaii's unemployment and unemployment rate has been increasing, <http://www.bls.gov/eag/eag.hi.htm>, interestingly all around the time of SEP 2013.

Solar has been a major, sustainable economic engine for Hawaii. As of 2012, it accounted for 28% of all construction expenditures in the state. (<http://files.hawaii.gov/dbedt/annuals/2013/2013-erc.pdf>).

What i'm afraid of is the second and third round of layoffs in our industry will be worse and cause irreversible damage. You'll have more companies closing down with even more layoffs ultimately losing all or more than 28% of the construction expenditures that its been contributing in Hawaii.

The solar industry also catalyzes other industries like roofing, electrical, general contracting, engineering, and its not only building, its marketing, advertising, printing and digital.

From all the things i've just covered, the worst experience i've had since SEP 2013 was hearing about or sitting down with the 20 employees, most of them who I've come to personally know.

As hard working as they were supporting their own children and families was to tell them they can no longer continue to work with us.

Thank you for the opportunity to submit my testimony.

Kind regards,

--

Michael Ito

Director of Marketing



AlternateEnergy

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Testimony in support of Senate Bill 2656
Feb.3, 2014

Dear Senators and all whom it may concern,

My name is Nancy Robberson and I have been a Maui resident and Maui Electric Company (MECO) customer for almost thirty years. On September 5, 2013 I signed an agreement with an established Maui company for a photovoltaic system installation at my and my husband's home in Kula. Because the cost of buying the PV outright equated to one year's salary (I was a high school teacher here on Maui for twenty years), I got a loan in order to pay for the installation. On Dec. 6, 2013 I received an email from MECO's Donald Mahoe and Steven Rymsha (Supervisor, Renewable Energy Projects), saying that an "engineering study" was needed for our home's circuit and that protective equipment may be installed "in 12-18 months." The letter went on to state: "We will contact you when the circuit upgrades are complete and *provide you with your prorated share of the upgrade costs.*" In addition to working very hard to cover the basics, my husband and I have also dedicated our lives to be of service to Maui's people through teaching, coaching, and volunteering for numerous community groups. This letter was incredibly discouraging. MECO's vague timeline combined with its unspoken and unclear additional costs (many homeowners have had to pay at least \$3000 extra for a "study") is a harsh and unfair burden to place upon people who simply want to reduce dependence on fossil fuels and do what is right.

My husband and I personally know and are friends with many employees of MECO and they are all bright, caring people with integrity. We truly want to trust and believe that MECO and its mother company, Hawaiian Electric Industries, have the best intentions for Maui's people. It is disheartening to then find out about the huge profit margins as well as shareholder and board member salaries that MECO and Hawaiian Electric Industries enjoy while many in Maui struggle just to put food on the table. For example, Constance Lau, Hawaiian Electric Industries CEO made \$5,823,670 in 2012 while HEI's Chief Financial Officer, Jeff Ajello, made \$2,184,730 (<http://www.reuters.com/finance/stocks/companyOfficers?symbol=HE>). Is this the real reason we are paying the highest utility rates in the nation and triple the national average? Are these "upgrade costs" simply an easy way to pay the approximately \$100 million per year that gets paid out in dividends to HEI's stockholders? (Fitch Ratings; "Fitch Assigns Initial Ratings to Hawaiian Electric Industries & Hawaiian Electric Co.;" <http://www.reuters.com/article/2014/01/21/fitch-assigns-initial-ratings-to-hawaii-idUSFit68473620140121>; Jan.21, 2014). It is equally disturbing to read that Maui's energy commissioner, Doug McLeod, claims that "the Oahu trend (for obstructing PV installation) is not occurring on Maui or Molokai." For him to state "it is still growing and growing at a decent pace"

(The Maui News, Jan. 29, 2014) insults those of us who are experiencing added stressful costs and unfair delays.

While Maui Electric Company and its parent Hawaiian Electric Industries (HEI) claim to care about the community they are supposed to serve, their decision makers consistently set up road blocks for those of us who want to practice true sustainability. The letter from Mr. Mahoe and Mr. Rymsha states: "Once we receive your signed agreement and prorated share of upgrade costs, we will issue you a pre-approval notice to proceed with your installation." At the minimum MECO is utilizing delaying tactics; at its worst it could be viewed (and perhaps is seen by many) as a profit-hungry monopoly that practices price gouging because it can. Indeed, out of four bullet points in MECO's Vision and Operating Philosophy "remaining a financially successful company for all stakeholders" and "building long-term value for our shareholders" are its top priorities (www.mauielectric.com/meco/About-Us). Apparently Maui residents who do not own stocks in HEI are not a part of this vision. MECO's justification to us for the exorbitant added costs and delays of photo voltaic installation is safety: "Too much solar power connected to a circuit without proper protection equipment is dangerous. It can put the lives of utility workers at risk and cause poor electric service, from flickers to outages." (Rymsha, Steven; 2013 Letter) Where is the actual evidence based upon scientifically unbiased research to prove this? What are the specific standards to determine that a neighborhood is "saturated" with photovoltaic panels and why are those standards different depending on what address one has? What evidence-based measurements are being used to determine who gets photovoltaic permits and who does not? MECO leaders need to either provide real, verifiable and reproducible studies to substantiate their lifesaving claims as well as specific breakdowns of "study" costs or they need to be sincere about their service to Maui's people, its ecology, and its economy and step aside by stopping the obstructions. Harnessing the sun's power should be a basic, unalienable right for all. I wholeheartedly support the passage of Senate Bill 2656 as this may be a first step in getting MECO, HECO, and HEI to go from a conglomerate that puts huge profits first to a company that truly is of service to the people and the community which we share.

Mahalo for your time and consideration,

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nancyr@hawaii.rr.com

SB2656

Submitted on: 2/3/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Lyn Howe	Individual	Support	No

ALOHA MY NAME IS GUS COBB-ADAMS I THINK WE HAVE A RIGHT TO HAVE SOLAR. HECO GIVES US THE OK TO GO AHEAD, THEN THEY SAY THE GRID WONT HOLD UP . WHAT GOING ON DO THEY REALY KNOW WHAT IS GOING ON??? I BEEN WAITING FOR A WHILE THEN IM TOLD I HAVE TO WAIT, BUT NO TIME LIMIT . DOESN'T HECO KNOW WHAT TO DO, THEY SURE ARE TAKING A WHOLE LOT OF TIME TO SEE WHAT IS GOING ON OR THEY DONT REALLY CARE ABOUT THE PEOPLE OF THIS STATE. ONLY THE MONEY IN THEIR POCKETS.

SB2656

Submitted on: 2/3/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Christian Falck	Individual	Support	No

Comments: I support the updating of the grid to have solar installed on every rooftop that wants to enter the 21st century with clean renewable energy from the sun. HECO needs to work quickly to allow everyone that wants it to go solar. The price of HECO has gone up year after year and solar with battery backup is how to be smart with Hawaiian energy and keeping costs down.

Yes I think everybody should have the right to Solar, the Electricity is simply unaffordable .

Christa Geise

SB 2656

my wife and i, both retired were looking to reduce our electric bill which is always rising. We looked into pv systems since we had a solar water heating since the 90's, which worked well to this day. After making a loan to acquire a pv system in september, we were informed that we could not connect to the grid. so now we have two bills to pay thanks to HECO. The so called grid problem came without any warning to the public, claiming safety was the issue. The word safety to me is a word that can camouflage a lot of things in their favor, knowing the public cannot dispute safety. But i am sure the public has a lot of things to say about them for there lack of timing and poor excuse for so called "study" for almost six months. After September i heard nothing about their "study", what exactly are they doing to address the problem? the public is not being informed on any progress been made since or what the "study" really consist of. they are keeping the customers in the dark and every so often brings out some bits of information to show progress. they are probably buying time , as you know time is money. Thanks for your time!

Lowell Miura

All residents should have equal access to solar panels that can be introduced onto HECO's grid. What good is all this effort to generate "clean" energy if the monopoly electric company cannot/will not provide the upgraded technology that make it possible to utilize that energy?

Putting the energy creation (the cart) before the grid availability (the horse) is not only a total study in frustration by the consumer, but just one more constantly increasing cost they must bear. HECO has had more than adequate time-years in fact!- to invest in necessary upgrades, but has dragged its corporate monopoly feet.

Why did the legislators promote solar so intently over the last few years, offering huge rebates to consumers who still had to spend a hefty chunk of money on the solar panels and subsequent installation, if said legislators had no clear vision of HECO's technology shortcomings to integrate said power onto the grid?

More than a few questions have gone unanswered.

Cynthia Frith
42-128 Kooku Place
Kailua, HI-96734

SB2656

Submitted on: 2/3/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Joy Leilei Shih	Individual	Support	Yes

Comments: Aloha Chair Baker, Chair Taniguchi, and members of the committee, I strongly support SB 2656. In order to help Hawaii lessen its dependence on fossil fuels and support the growing renewable energy industry, we must make the grid available to everyone, and ensure that the PUC has the resources to ensure a more modern and efficient grid. All Hawaii residents have the right to the cost saving and environmental benefits of solar! Please advance this important measure. Mahalo for the opportunity to testify. ~Joy Leilei Shih

Hi,

Last year after we spent lot of time searching and evaluating cost and benefits of installing solar panels on our house at Aina Haina, we finally signed contract with Solar City to install it early this year.

But I heard HECO is turning down applications, I am really concerned.

I can see each solar installation means less profit for HECO. But we should see the big picture --- each solar installation is good to mankind. Global warming is real, fossil fuel is expensive and dirty, oil is a diminishing energy source which should be saves as much as possible for fuels that have no near term alternative such as airplanes and for petro-chemical products. Hawaii islands have extra shipping cost for fossil fuels.

I have right to choose clean and cheaper energy to use. I have right to protect the beautiful Hawaii. I hope to have legislative support for consumers and solar workers. Thank you.

Alex Li

SB2656

Submitted on: 2/3/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Karen Chun	Individual	Support	No

Comments: HECO/MECO need to upgrade their system and start installing energy storage - NOT cut rooftop solar! They're coasting on an out-of-date utility paradigm. Karen Chun
Former utility engineer

SB2656

Submitted on: 2/3/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

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

Comments: I have worked in Hawaii's solar industry since December 2007. I strongly urge our State Leaders to support SB2656 that promotes solar installations on our islands. We are all stakeholders in this matter and must work together to ensure an affordable and sustainable energy future. Using existing rooftops and long-overdue grid upgrades, it is possible to curtail the need for fossil fuels and their related expenses. Hawaii is in a prime leadership role not just for the United States but for the world. We have the power to demonstrate a smooth transition from fossil fuels to renewable energy. We can work together so that all parties have the resources necessary to sustain the process. It would be a tragedy to have this unprecedented transformation of our energy system broken down by fixable matters. I strongly urge our leaders to support SB2656.

I am testifying in support of SB 2656.

Homeowners who buy PV panels are doing the environmentally and eco-friendly option and being punished for it. I live in Manoa. It is not very sunny where I live and my house is *not* a prime candidate for solar. I had to buy more panels, and higher quality (i.e. more costly) panels than someone living in, say, Makakilo or Ewa Beach. The final, total cost of my PV was quite significant. It will probably take fifteen years before the PV comes even close to paying for itself. Yet my husband and I still chose this option. This expensive option because it was the right thing to do for Hawaii's future. We just had our first child. He is one year old. Buying into alternate energy is the right thing to do for his future.

Yet HECO is punishing us for trying to be pro-active about alternate energy. We met with our PV company and agreed to terms in August. We officially signed a contract and paid for our system in September 2013. Literally, at the same time that we were signing our contract and paying that extraordinary bill local news was reporting that HECO had decided to not install the NET metering for any new PV customers *as of right then*. HECO did not make this statement and give a grace period of, say, three to six months. HECO did not widely promote this and make sure this was a point that all potential consumers knew about. No, they just decided to do it and punished consumers who happened to be getting their system and the exact time that HECO decided to enact this new rule.

New PV customers now at least know of the situation. It has now become common knowledge. I still think it is unfair because HECO should be accommodating local residents who are turning to alternate energy. They should be rewarding their commitment to cleaner, renewable energy--not punishing them. Yet, it is even more unfair and frustrating for owners like myself who were caught unaware of HECO's extremely long and vague "Representative Studies" which have no end date or timeline. How long can HECO basically keep using the extra energy that I produce, that I paid a lot of money for, and just absorb it back into their system without giving me credit for it?

HECO needs to update with the times and help the process for its customers that are choosing to do so, not bully them to shy away from PV or subjugate them to financial penalties.

SB 2656 is not the full answer, but it is a start.

--

Michelle Shin
Lifelong Hawaii resident
Believer in alternate energy

SB 2656

To Whom it May Concern,

I work for REC Solar and spend my days talking to people about the cost savings as well as the environmental benefits of going solar. Every home owner, tenant, and user of electricity wants to go solar, very few want to do so for environmental reasons, most just want to escape from the 35 cents a kilowatt that they are currently paying to HECO. I am not an engineer and don't pretend to truly understand the complexities of grid stability when too much solar is on a given circuit. I guess I believe what HECO says but it doesn't change the fact that they have had plenty of time to address this situation and upgrade the grid and it hasn't happened, they must be forced to do so. A recent report I saw listed Honolulu as the 3rd most expensive metropolitan area in the nation. Thousands of people work two jobs, or three, just to get by here in paradise. Let the solar industry get back on track, creating jobs, saving their customers thousands of dollars and lessening our dependence on imported oil (even if its imported from the US mainland, it is still imported). Solar energy is the way forward for Hawaii and its people, please, please, force HECO to modernize the grid as they should have been doing for decades.

Sincerely,

Claude McGee

Regional Sales Manager
Hawaii

Email: cmcgee@recsolar.com

Cell: (808) 351-0821

Toll Free: (888) 657-6527 / (888) OK-SOLAR

Aloha,

I am in favor of people in Hawaii being able to put solar panels on their roof and be part of the electric grid. Why NOT have normal people using their panels to provide power for the state?

It makes sense.

Sincerely,

Mary K. Groode

P.O. Box 1551

Kihei, HI 96753

dechenmaui@hawaii.rr.com

SB2656

Submitted on: 2/3/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Thomas Engle	Individual	Support	No

Comments: I strongly support SB 2656, it seems silly to even need this bill, but for whatever reasons, HECO is not supporting solar energy use by Hawaii residents and is dragging it's heels. Enough already! People have invested tens of thousands of dollars in solar systems, HECO is dragging its feet and costing the solar energy providers time and money. Let's get the ball rolling and catch up to the rest of the world - Hawaii needs solar now!!

SB2656

Submitted on: 2/3/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Fawn Liebengood	Individual	Support	No

My name is William Walker and I am a resident of Ewa Beach that installed a \$35,000.00 PV system at my residence in October 2013. Shortly after the installation of my system I became aware of HECO's new NEM / grid interconnectivity policy. HECO now requires that a NEM agreement be submitted and approved prior to the installation of the system which is exactly the opposite of the former process where the NEM agreement was the final step. HECO has determined the circuit in my neighborhood is above maximum saturation which may require further studies and improvement before I can connect.

In late November 2013, I received a letter from HECO stating that my system met their new guidelines which they had established for those of us who were "in limbo" and we would be "grandfathered" into the system without any additional costs for studies or grid upgrade costs. In mid January 2014 I received another letter from HECO which stated that despite the promise to be grandfathered into the system HECO could not approve me because of the saturation of level of my circuit.

HECO and HECO alone has created this "problem" and every time they propose a short term solution, which always gets press, they eventually go back on their word citing safety and reliability concerns. My PV system has been up for four months and HECO has not given me a timeline for when their "studies" or "upgrades" are going to be started, conducted, completed, etc.

I've had many sleepless nights and experienced a great amount of unnecessary stress due to HECO's actions.

I do not trust HECO and have no faith in their ability to make improvements to the grid on their own which is why I support SB 2656.

SB2656

Submitted on: 2/3/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
Yoshio Akaha	Individual	Support	No

I am testifying in support of SB 2656.

Imagine a Hawaii where we generated enough electricity for everyone's basic needs, with a surplus to charge vehicles, cutting our need to import oil into a fraction of what it is today. Instead of being vulnerable to every foreign crisis or shipping issue, we'd be largely independent. We're not there yet--we're not even close. But we could reach this goal in a few years. Hawaii, more than ANY state in the US could and needs to become solar-powered. We have the highest energy costs in the nation, and the sunniest climate-year round to provide enough solar energy. Squandering these gifts and limiting our solar future can't be justified. Discouraging residents who are currently using oil-based electricity from switching to solar is a step backwards, away from this positive future. The grid does need upgrading, and HECO will eventually be reduced to a power manager, instead of the seller it is today. But this is clearly what we need to do for our future and our children's future. The problem today is that HECO is not motivated to work towards this future and the grid modernization that will diminish their profits. The public relies on the PUC to serve our broadest interests, and our future interests, regardless of short term profit margins. Reducing our energy dependence-even one house at a time-will make a huge difference. I hope the PUC will do whatever is necessary to keep us on the road to encouraging the spread of solar power. As an Island community we are especially vulnerable to energy shortages. Please help us do what's necessary to encourage and increase our energy independence. Global warming is already happening, we owe it to ourselves and future generations to look beyond the short term and continue our progress towards as much of a solar future as we can have. The steps taken now, to encourage, or slow, the use of solar energy will have downstream impacts for years to come. Slowing the spread of solar will cripple our efforts to become more independent. If we know this independence is where we need to go, how can we justify not taking every step we can to make it happen?

Sincerely,

Daniel Rubinoff

I write in support of SB 2656. Hawaii needs a more aggressive energy policy focused on sustainable and renewable resources in order to curb our dependence on fossil fuels and the resulting social, economic, and environmental costs associated with such dependence. Our utilities need to invest in a more modern grid to support alternative energies and serve the public good. It should be our state's goal to make fossil fuel and other non-renewable resources the alternative energy in the near future.

Sincerely,
Aaron J. Levine

3840 Kaimuki Ave.
Honolulu, HI 96816

SB 2656

I am testifying for the rights of the people of Hawaii to go green by installing solar facilities, share the electricity they generate, and avoid the high cost of energy from Hawaii's utility companies.

- Since 2009, average residential rates have gone up by more than 50% in HI. I installed a solar facility on my house in 2012, and it took one year to get Hawaiian Electric to agree that the facility met their inspection. They asked for multiple inspections. I began to feel they delayed on purpose so I could continue to pay outrageous costs of \$400 monthly. I have a 4 bedroom home with 4 people, and no air conditioner. We have energy efficient equipment and light bulbs, yet the bill continued to be \$400. The people of Hawaii should not have to pay such exorbitant fees. In the news 3 days ago was an article about Hawaiian Electric pursuing their own large scale solar facility that will attach to their grid, yet they want to regulate how many residential customers can attach to their grid. They have a total monopoly, and it needs to stop.
- HI residents should have the ability to pursue cleaner and cheaper options.
- Solar has been a major, sustainable economic engine for Hawaii that creates jobs. As of 2012, it accounted for 28% of all construction expenditures in the state.
- HECO has repeatedly failed to demonstrate a plan for growth of innovative technologies- the PUC needs to chart a way forward on grid modernization.
- This bill forces both HECO and the PUC to act on the will of the people: A recent public opinion poll showed that over 96% of voters in HI support rooftop solar, and I am one of them!

Aloha, and thank you for supporting the people of Hawaii.

Rebecca Gray, Nurse Practitioner

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SB2656

Submitted on: 2/4/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

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

SB2656

Submitted on: 2/4/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

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

Comments: I am in full support of this bill. However, I feel that the timeline for completion is too far off. We need these rules changed within this year, 2014. Too many jobs have been lost and too many residents have been shut out of the opportunity to take control of their energy costs through the installation of Solar PV. Action must be taken swiftly in order to help the most people. This must also take into account the sun-setting of ITC, which occurs in 2016. Unless we take immediate action, the Solar Electric industry in Hawaii will continue to decline and the local constituents will bare the brunt of the high electric costs and the insecurity of Energy resources throughout the islands. It is well known that we need Demand Response Inverters, such as the SMA TL-22 series available now, as well as storage on both sides of the circuit. With these measures implemented, we should be able to increase circuit penetration significantly without fear of adverse grid conditions. I will reiterate, we need these changes now. 2016 will be too late.

SB2656

Submitted on: 2/4/2014

Testimony for ENE/CPN on Feb 4, 2014 14:45PM in Conference Room 225

Submitted By	Organization	Testifier Position	Present at Hearing
William A Brizee	Individual	Comments Only	No

Comments: I am in full support of this bill. However, I feel that the timeline for completion is too far off. We need these rules changed within this year, 2014. Too many jobs have been lost and too many residents have been shut out of the opportunity to take control of their energy costs through the installation of Solar PV. Action must be taken swiftly in order to help the most people. This must also take into account the sun-setting of ITC, which occurs in 2016. Unless we take immediate action, the Solar Electric industry in Hawaii will continue to decline and the local constituents will bear the brunt of the high electric costs and the insecurity of Energy resources throughout the islands. It is well known that we need Demand Response Inverters, such as the SMA TL-22 series available now, as well as storage on both sides of the circuit. With these measures implemented, we should be able to increase circuit penetration significantly without fear of adverse grid conditions. I will reiterate, we need these changes now. 2016 will be too late.

I have been asked to submit in writing my concerns about SB2656.

In September I signed a contract with a solar company to help offset the extremely high cost of electricity. Hawaii has the highest utility bill in the nation. My family and me have to budget for five. We are limited on our income and need to reduce the utility cost. We were under the impression that HECO had been given money by the State Legislator to upgrade for the PV system. We signed a contract right before the time when HECO froze all new installations for the PV system. We have lost out on approximately \$3600 toward utility bills that could have been redirected toward other household expenses or savings during the time of financial dilemma in the United States.

I am asking that you look into HECO as they continue to not just slow the process, but more along the lines of stopping all new installation of the PV systems. This has probably cost other families just like me undue hardship and costs.

v/r
Mr. Kevin Gardiner

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