

TESTIMONY OF RANDY IWASE  
CHAIR, PUBLIC UTILITIES COMMISSION  
STATE OF HAWAII  
TO THE  
HOUSE COMMITTEE ON  
ENERGY & ENVIRONMENTAL PROTECTION

February 5, 2015  
8:30 a.m.

**MEASURE:** H.B. No. 1508

**TITLE:** Relating to Energy Resources.

Chair Lee, Vice Chair Lowen, and Members of the Committee:

**DESCRIPTION:**

This measure requires the Public Utilities Commission (“Commission”) to commence a proceeding by September 1, 2015 regarding equity for all ratepayers in net energy metering.

**POSITION:**

The Commission would like to offer the following comments for the Committee’s consideration.

**COMMENTS:**

The Commission initiated Docket No. 2014-0192, also known as the Distributed Energy Resource (“DER”) docket to investigate the technical and economic issues associated with DER policies, including the net energy metering program. In reviewing these issues, the Commission has received considerable feedback from the parties and public, which are available in the public docket record.

However, as a quasi-judicial agency, the Commission cannot comment further on the substantive matter of pending dockets, including Docket No. 2014-0192.

Thank you for the opportunity to testify on this measure.



DAVID Y. IGE  
GOVERNOR

SHAN S. TSUTSUI  
LT. GOVERNOR

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TO THE HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION

THE TWENTY-EIGHTH LEGISLATURE  
REGULAR SESSION OF 2015

THURSDAY, FEBRUARY 5, 2015  
8:30 a.m.

TESTIMONY OF JEFFREY T. ONO, EXECUTIVE DIRECTOR, DIVISION OF  
CONSUMER ADVOCACY, DEPARTMENT OF COMMERCE AND CONSUMER  
AFFAIRS, TO THE HONORABLE CHRIS LEE, CHAIR,  
AND MEMBERS OF THE COMMITTEE

HOUSE BILL NO. 1508 - RELATING TO ENERGY RESOURCES

**DESCRIPTION:**

This measure proposes to require the Public Utilities Commission ("PUC") to commence a proceeding by September 1, 2015, regarding equity for all ratepayers in net energy metering.

**POSITION:**

The Division of Consumer Advocacy supports the intent of this measure and offers the following comments.

**COMMENTS:**

The proposed legislation requires the PUC to initiate a proceeding to investigate a growing concern that is related to the proliferation of distributed generating systems, specifically rooftop photovoltaic systems (or "rooftop PV"), that participate in the net energy metering programs offered by electric utility companies.

Due to the continued interest in installing rooftop PV in Hawaii, an investigation of how to equitably proceed is a reasonable measure. The Consumer Advocate notes that this very issue has already been raised in a number of different proceedings and will be addressed. Most recently, the Hawaiian Electric Companies, in Docket No. 2014-0192, filed a motion to transition to a new distributed generation tariff for new rooftop PV applications. Therefore, since the opportunity to review the net energy metering programs and how to equitably move forward with additional rooftop PV is already part of proceedings currently before the PUC, additional legislation as currently proposed in this measure appears unnecessary.

Thank you for this opportunity to testify.



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

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Statement of  
**LUIS P. SALAVERIA**  
Director  
Department of Business, Economic Development, and Tourism  
before the  
**HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION**

Thursday, February 5, 2015  
8:30 a.m.  
State Capitol, Conference Room 325

in consideration of  
**HB 1508**  
**RELATING TO ENERGY RESOURCES.**

Chair Lee, Vice Chair Lowen, and Members of the Committee.

The Department of Business, Economic Development & Tourism (DBEDT) respectfully offers comments on HB 1508 which requires a proceeding by September 1, 2015, to establish an equitable minimum charge for all customers and a distributed energy resources service charge.

DBEDT supports the intent to reform Net Energy Metering (NEM) to an equitable structure which mitigates cost shifts between customers and expands rate structures for the integration of Distributed Energy Resources (DER). To that end, DBEDT believes the design of the tariff should provide for unlocking the maximum benefit from the DER technologies thereby helping to reduce costs for all customers. DBEDT also believes that a sustainable system is one which accounts for potential cost shifts between DER customers themselves. A one-size-fits-all DER charge could very well result in such cost shifts between DER customers as the number of DER technologies increase, and DER customers become more diverse in the energy services they need from, and provide to, the grid.

There are several solutions by which customer indifference can be achieved and DBEDT believes that the PUC should not be constrained by statute in its efforts to achieve the intent noted above. One solution, which the current legislation effectively selects, is creating a separate

class of customers, DER customers, and apply a charge to ensure costs are not shifted from, or to, this class of customers to non-DER customers.<sup>1</sup> Another option is to charge customers for the services they receive from the grid and credit those customers for the services they provide to the grid. This method would both charge and compensate customers based on cost causation and marginal cost principles. In short, it would put fixed charges in place to recover fixed costs; energy rates (\$/kWh) to recover energy costs; and capacity-based charges for the level of demand a customer requires of the grid and generators. In turn, DER customers would receive compensation for their DER technologies based on the energy and capacity services they provide to the grid. Fixed monthly charges<sup>2</sup> would recover the costs of things like the customers' meter and the call center that do not vary by a customer's use of energy or the grid. Both options, and variations thereof, are being explored around the country for DER customers and non-DER customers alike.<sup>3</sup>

DBEDT does not argue that a choice needs to be made in this legislation, but rather that the PUC have the flexibility to approve the solution which best meets the needs of customers and has the ability to adapt over time as technologies and markets change.

Thank you for the opportunity to offer these comments regarding HB 1508.

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<sup>1</sup> HB 1508 Section 2.(a)(2), page 2 line 9 through 17

<sup>2</sup> This is somewhat different from the legislation as written in Section 1. (1), which could potentially be read as a "minimum bill". A minimum bill does not recover fixed costs through fixed charges but rather in the variable energy rate. A "minimum bill" simply ensures a set amount of revenue is collected from customers no matter how low your energy use, or net energy use, is.

<sup>3</sup> Arizona Public Service, Salt River Project, San Diego Gas & Electric among others have either proposed or implemented rate options for residential customers, DER or otherwise, that incorporate customers capacity need (kW).



**Directors**

Jody Allione  
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Joe Boivin  
Hawaii Gas

Kelly King  
Pacific Biodiesel

Warren S. Bollmeier II  
WSB-Hawaii

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

HB 1508, Relating to Energy Resources

February 5, 2015

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

The purpose of HB 1508 is to require the Public Utilities Commission to commence a proceeding by September 1, 2015, regarding equity for all ratepayers in net energy metering.

HREA **supports** the intent of this measure and offers the following comments for the Committee’s consideration:

- 1) Is a New Docket Necessary. We are not sure a new docket is necessary, given that the Commission has already opened a docket entitled “Distributed Energy Resource Policies” (Reference Docket No. 2014-0192). Specifically, the issues raised in this measure may be considered to be part of the scope of the above docket.
- 2) All Costs and All Benefits. In addition to the potential impacts to ratepayers, we believe it would also be appropriate have the PUC investigate the overall costs/benefits of net metering to Hawaii’s economy.

Mahalo for this opportunity to testify.



**Hawaii Solar Energy Association**  
*Serving Hawaii Since 1977*

Before House Committee on Energy and Environmental Protection  
Thursday, February 5, 2015, 8:30 a.m., room 325  
HB 1508: Relating to Energy Resources

Aloha Chair Lee, Vice Chair Lowen and members of the Committee,

On behalf of the Hawaii Solar Energy Association (HSEA), I would like to testify in support of HB 1508 with one suggested amendment, which requires the PUC to commence a proceeding by September 1, 2015 regarding equity for all ratepayers in net energy metering (NEM).

The NEM program has enjoyed considerable success as a means for residential and small commercial customers to take charge of their electric bills and invest in green energy infrastructure for the benefit of the entire state. NEM has more than doubled each year since 2008, from 471 customers in 2008 to over 45,000 customers at the end of 2014. NEM allows customers to offset some portion of their electric bill, and serves as a hedge against rising fuel costs. In addition, with over 350 MW installed NEM systems, the program is responsible for the offset of over 1 million barrels of oil which are not extracted, transported, and burned in Hawaii each year.

However, with the growth of NEM, the question has been raised as to what the impact of NEM has upon other ratepayers in the form of “cost shift.” Cost shift is the estimated lost contribution to fixed costs and surcharges based on NEM installations. These fixed costs and surcharges go to pay for basic grid services, and the concern is that just paying the minimum bill may not cover the entire fixed cost of grid operation. Essentially, the question is: are NEM customers paying their fair share?

At the same time, renewable advocates and NEM customers question why the “cost shift” calculation does not include the many benefits that NEM systems provide to the grid which in turn benefit all ratepayers. Some of these benefits include reduced transmission losses, delayed or offset need for grid upgrades, and shaving of the afternoon peak, in addition to job creation, and environmental benefits mentioned above.

HB 1508 examines the question of NEM by looking at both the cost and benefit of NEM with the goal of analyzing the cost of service and adjusting the minimum charge to reflect the true cost of service so that all ratepayers pay their fair share as deemed to be so within their rate class. Specifically, HB 1508 seeks to establish an equitable minimum monthly charge, and a distributed energy resource service charge or refund for prospective NEM customers that would account for benefits and costs NEM customers provide to the grid, while ensuring that no group is subsidized by another.

HSEA generally supports these provisions but respectfully requests that HB 1508 be amended so that the minimum charge continues to encourage customers to install efficiency items such as solar hot water in addition to smaller PV systems, with a gradually increase in the minimum charge as the size of the PV system grows. As the minimum charge goes up, the incentive to save energy and be efficient goes down accordingly. A relatively high minimum charge would discourage customers from installing new energy efficient appliances and solar hot water, for instance, and HSEA does not believe that reducing the incentive to save energy is a good energy policy. In addition, a high minimum charge would discourage customers from installing smaller PV systems, which in many cases is all a customer may be able to afford.

Although HSEA does support the general policy of customers “paying their share,” some allowance should be made to encourage the efficient use of energy and the investment in clean energy generally.

Some parties might prefer to let the commission continue to examine this issue under the DER Docket No. 2014-0192. Unfortunately, the docket at this point is moving very slowly and we do not anticipate an answer any time soon. Parties filed motions to intervene in the docket in early September of 2014, and commission has not yet chosen intervenors. Once the docket is open, it may take a year or longer to complete. HB 1508 would help expedite the NEM issue and ensure that NEM is administered in a fair and equitable manner. It may also serve to ensure that the commission has the staff it needs to complete its considerable workload. The issue of equity and fair payment in the NEM program has gone unanswered for too long.

Thank you for the opportunity to testify

Leslie Cole-Brooks  
Executive Director  
Hawaii Solar Energy Association





## **HOUSE COMMITTEE ON ENERGY & ENVIRONMENTAL PROTECTION**

February 5, 2015,  
*(Testimony is 4 pages long)*

### **TESTIMONY IN SUPPORT OF HB 1508 WITH PROPOSED AMENDMENTS**

Aloha Chair Lee and Members of the Committee:

The Alliance for Solar Choice (TASC) appreciates the opportunity to comment on HB 212, relating to taxation. TASC advocates for maintaining successful distributed solar energy policies and markets throughout the United States. Collectively, TASC members serve a majority of the solar customers in Hawaii.

Hawaii's net energy metering program is a key reason for Hawaii's tremendous solar success: thousands of jobs created; approximately 12% of all customers are saving hundreds if not thousands of dollars each year; and millions of barrels of oil not burned. 44 other states and the District of Columbia have net metering programs, and these programs have been key to the adoption of residential photovoltaic systems throughout the country.

Net energy metering is classified as a power exchange between customers and the utility. This mechanism is easy for customers to understand and has led to the rise of innovative financing mechanisms that make clean energy widely accessible.

The success of net energy metering has led to opposition from fossil fuel and utility groups. Edison Electric Institute, the utility trade group, published a report called "Disruptive Challenges," and identified distributed generation as the biggest near-term threat to the utility industry's business model. The American Legislative Exchange Council identified the weakening or elimination of net energy metering as its key priority. These two groups and various utilities have spent millions of dollars advocating for bills that eliminate net energy metering or unfairly reform rates to make distributed power less attractive to customers. The primary tactic has been to challenge the "cost shift" between solar customers and non-solar customers.

As a result of this controversy, there is a growing body of benefit-cost studies of NEM from a wide variety of states across the U.S. These studies have been conducted by utilities, the solar industry, clean energy advocates, and four state commissions – California, Mississippi, Nevada, and Vermont. In 2013, the Rocky Mountain Institute completed a meta-analysis of much of this body of work which assesses the common features and most significant differences among such studies. Based on this literature,

there are four key attributes of these studies that are necessary to provide a comprehensive and balanced view of the economics of net metered systems:

- **Analyze the benefits and costs from the multiple perspectives of the key stakeholders.** It is important to assess the benefits and costs of net metering from the perspectives of each of the major stakeholders – the utility system as a whole, participating NEM customers, and other ratepayers – so that the regulator can balance all of these important interests. Examining each of these perspectives is critical if public policy is to support customer choice, equitable competition between distributed generation providers and the monopoly utility, and a sustainable renewable distributed generation industry.
- **Analyze the benefits and costs in a long-term, lifecycle time frame.** The benefits and costs of distributed generation should be calculated over a time frame that corresponds to the useful life of a distributed generation system, which, for solar DG, is 20 to 30 years. This treats solar DG on the same basis as other utility resources, both demand- and supply-side. When a utility assesses the merits of adding a new power plant, or a new energy efficiency program, the company will look at the costs to build and operate the plant or the program over its useful life, compared to the costs avoided by not operating or building other resource options. The same time frame and a comparable analysis should be used to assess the benefits and costs of DG.
- **Focus on net energy metering exports.** Fundamentally, there would be no need for net metering if no power was exported, and without exports a DG customer appears to the utility grid as simply a retail customer with lower-than-normal consumption.
- **Consider a comprehensive list of benefits and costs.** Renewable DG projects produce a broader set of benefits and costs than, for example, traditional power plants. For example, an important attribute of DG is its ability to serve loads without the use of the transmission system. Accordingly, an analysis of DG benefits should consider the avoided costs for transmission and distribution capacity, as well as for generation capacity. Renewable DG also will avoid the costs associated with environmental compliance at marginal fossil-fueled power plants. On the cost side, the analysis should consider whether solar or wind DG will result in new costs to integrate these variable resources.

In light of these suggestions, we offer several proposed amendments to this bill. Thank you for considering our comments.

## Proposed Amendments:

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

SECTION 1. The legislature finds that more than fifty thousand households in Hawaii have installed photovoltaic panels and enrolled in a net energy metering program to reduce their energy costs and that thousands of additional households seek to do so. ~~[Although h]~~Households that participate in a net energy metering program ~~[still]~~ use electrical-grid services and pay for any power consumed in excess of the power produced in addition to a regular monthly fixed charge.~~[r]~~ These households [they] also provide significant benefits to the electrical grid. Nonetheless, there has been a controversy over whether there is a cost shift between participants and non-participants in the net energy metering program, which has led to active attempts to slow down or reduce rooftop solar adoption.

The purpose of this Act is to:

- (1) Ensure a fair and reasonable minimum monthly charge for all households to account for basic costs for service common to all users;
- (2) Ensure that participants and non-participants in a net energy metering program do not unreasonably subsidize the costs of electrical service for each other; and
- (3) Revise ~~[Expand]~~ rate structures for the integration of distributed energy resources.

SECTION 2. (a) The public utilities commission shall commence proceeding(s) by September 1, 2015, to create a methodology that can be used in rate cases to:

- (1) Establish for all ratepayers an equitable minimum monthly charge for basic electrical-grid services common to both participants and non-participants in a net energy metering program, which shall be identified by electric utilities in billing for all grid-connected users; and
- (2) Determine fair compensation ~~[Establish a distributed energy resources service charge or refund ]~~ for prospective participants in a net energy metering program to:
  - (A) Account for ~~[other]~~all benefits and costs of participants exporting power back to the electrical grid in the net energy metering program ~~[provide to the electrical grid]~~; and

(B) Ensure that participants and non-participants in the net energy metering program do not unreasonably subsidize the costs of electrical service for each other.

(b) In establishing [~~the distributed energy resources service charge or refund~~] fair compensation pursuant to subsection (a) (2), the public utilities commission shall consider the gross costs and gross benefits of participants exporting power back to the electrical grid in a net energy metering program from the perspectives of participating ratepayers, non-participating ratepayers, the utility, and the State of Hawaii [to ratepayers] within each utility service territory[~~grid~~], including but not limited to:

- (1) The incremental program administration costs of the net energy metering program;
- (2) Net energy metering program bill credits;
- (3) Transmission and distribution line loss reductions;
- (4) Avoided capacity costs;
- (5) Avoided energy purchase costs;
- (6) Avoided transmission and distribution investment;
- (7) The value of reduced volatility in fuel costs;
- (8) Environmental benefits, including a reduction in the emission of greenhouse gases, air pollutants, reduced water usage in power production, and avoided land costs for generation or transmission and distribution infrastructure;
- (9) Compliance with renewable portfolio standards;
- (10) Storage, power-smoothing capacities and avoided ancillary services costs;
- (11) Enhanced grid security and resiliency;
- (12) Comparisons to other successful programs that achieve state energy goals, such as the energy efficiency and demand response programs; and
- (132) [(11)] Other electrical-grid services that advance the State's energy goals.

SECTION 3. This Act shall take effect upon its approval.



**HOUSE COMMITTEE ON ENERGY AND ENVIRONMENTAL PROTECTION**

February 5, 2015, 8:30 A.M., Room 325

(Testimony is 2 pages long)

Late

**TESTIMONY IN SUPPORT OF HB 1508**

Aloha Chair Lee, Vice-Chair Lowen, and members of the Committee:

We apologize for the submission of this late testimony. The Blue Planet Foundation supports HB 1508, which establishes a policy that will enable, at long last, require a robust analysis of distributed energy resources such as rooftop solar, and account for *both* costs and benefits to all ratepayers. Analytical studies in other locations have shown that under a traditional net energy metering rate structure, the “cost-shift” to non-participants either doesn’t exist or is very small in relation to the environmental and grid benefits. In Hawaii, the dialogue to date assumes, without evidence, that this cost-shift is much more significant. Hawaii ratepayers deserve better.

The expansion of distributed renewable energy under the net energy metering rate structure, along with energy efficiency, has enabled tens of thousands of Hawaii households and businesses to help the electricity system meet clean energy mandates. Simultaneously, energy efficiency and clean energy have succeeded in partially de-linking the cost of electricity from the cost of fossil fuels, resulting in lower average monthly residential energy bills. The creation of a distributed renewable energy industry in Hawaii has created new local construction jobs, stimulated the local economy, reduced emissions of greenhouse gases, and promoted energy security. It is in the public interest to expand on this success and enable more residents and businesses to participate in distributed renewable energy generation. By implementing a smarter distributed energy rate structure, the state can achieve this by fairly and transparently valuing clean electricity and grid infrastructure for all utility customers.

Blue Planet Foundation supports HB 1508. However, we respectfully request that the bill be amended to de-emphasize the concept of a “minimum bill” (Hawaii ratepayers already pay a substantial minimum bill that is larger than in many other places), and instead emphasize a dynamic rate structure that can: (i) account for the supply and demand of energy as it changes over time, (ii) account for the size of a distributed energy resource in relation to the customer’s electrical load, (iii) account for the capacity needed to supply the customer during times when the distributed resource is not generating energy, and (iv) distinguish between concurrent generation and use (which is indistinguishable from energy efficiency), and generation that is exported to the grid. With factors such as these in place, the rate structure can capture the

value of electricity when it is placed onto the grid, and the value of electricity when it is consumed from the grid. This can help to balance supply and demand, and can incentivize the storage of clean electricity for use when demand is highest.

Thank you for this opportunity to testify.