

**DEPARTMENT OF BUSINESS,
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Statement of
THEODORE E. LIU
Director

Department of Business, Economic Development, and Tourism
before the

**SENATE COMMITTEE ON COMMERCE, CONSUMER
PROTECTION, AND AFFORDABLE HOUSING**

Friday, March 28, 2008

9:00 a.m.

State Capitol, Conference Room 229

in consideration of

**HB2550 HD2 SD1
RELATING TO PUBLIC UTILITIES.**

Chair Kokubun, Vice-chair Ige, and Members of the committee.

DBEDT appreciates the intent of HB2550 HD2 SD1 to enhance Hawaii's energy and economic security by increasing the accessibility of net energy metering. The bill proposes to amend Section 269-102, Hawaii Revised Statutes, Hawaii's net energy metering law by empowering the Public Utilities Commission to:

1. modify the maximum total rated generating capacity produced by eligible customer-generators;
2. reserve a certain percentage of the total capacity generated for residential and small commercial customer-generators;
3. define the maximum capacity for eligible residential and small commercial customer-generators;

4. evaluate on an island by island basis, the applicability of the generating capacity requirements; and
5. exempt an island or a utility grid from the generating capacity requirements.

While DBEDT appreciates the intent of this measure, which increases the accessibility of net metering by empowering the Public Utilities Commission to define the critical elements of Hawaii's net energy metering, DBEDT would like to offer some comments for the Committee's consideration:

1. The purpose of Hawaii's net energy metering law is to encourage customers' investment on renewable energy systems to supply a portion of their electric energy consumption, which ultimately benefits the customer, the utility, the economy, and Hawaii's energy security. With this goal, DBEDT suggests that the committee consider including in the language of the bill guidelines for the Public Utilities Commission in modifying and/or defining the critical elements of Hawaii's net energy metering law. Such guidelines could include but not limited to ensuring that the capacity size or limits set or defined by the Public Utilities Commission will effectively increase the use and development of renewable energy by including some measureable net energy metered goals for the utilities to achieve.
2. Rather than reserving a certain percentage of the total rated capacity produced by customer-generators for

residential and small commercial customer-generators, that the language of the bill exempt or exclude eligible customer-generators with less than 10 kW capacity from the total rated capacity produced by customer-generators set or defined by the Public Utilities Commission.

In addition to the above comments on net energy metering, DBEDT also recommends adding one Part to the bill, to increase Hawaii's renewable portfolio standard from the current twenty per cent in 2020 to twenty-five per cent; raise the percentage of the renewable portfolio standard to be met by electrical energy generation from renewable resources from the current level of fifty per cent to eighty per cent; and to continue to allow an electric company and its electric utility affiliates to aggregate their renewable portfolio, provided that the share of the total aggregated renewable portfolio on Oahu shall be at least sixty per cent of the total.

These proposed amendments to the Renewable Portfolio Standard are achievable and will further enhance the intent of HB2550 HD2 SD1, and are necessary and important in decreasing Hawaii's dependence on imported fossil fuel. These suggested amendments to Chapters 269-92 and 269-93 are detailed below.

The role of Hawaii's Net Energy Metering (NEM) law and Hawaii's Renewable Portfolio Standard (RPS) in reducing Hawaii's dependence on imported fossil fuel and achieving energy security is critical. Equally critical are the outcomes and results of several related regulatory proceedings (or dockets) that are before the Public Utilities Commission, which could affect the effectiveness of the NEM and RPS statutes in moving Hawaii towards increased use and development of renewable energy resources and diversifying Hawaii's

electric energy generation portfolio. Some of these PUC dockets include but are not limited to the following:

1. Docket No. 2006-0084 relating to Net Energy Metering;
2. Docket No. 2007-0416 relating to HECO's proposal to implement a Renewable Energy Infrastructure Program;
3. Docket No. 2007-008 relating to renewable portfolio standard;
4. The dockets relating to each of the HECO companies' request for general rate increase;
5. The dockets relating to each utility's integrated resource planning; and
6. Docket No. 03-0372 relating to competitive bidding for new generating capacity.

The Public Utilities Commission is the agency that could better provide this committee with the complete list of the open dockets that could affect the effectiveness of the NEM and RPS statutes.

The proposed amendments to Section 269-92, HRS, are as follows:

"§269-92 Renewable portfolio standards. (a) Each electric utility company that sells electricity for consumption in the State shall establish a renewable portfolio standard of:

- (1) Ten per cent of its net electricity sales by December 31, 2010;
- (2) Fifteen per cent of its net electricity sales by December 31, 2015; and
- (3) [~~Twenty~~] Twenty-five per cent of its net electricity sales by December 31, 2020.

(b) The public utilities commission may establish standards for each utility that prescribe what portion of the renewable

portfolio standards shall be met by specific types of renewable [electrical] energy resources; provided that:

- (1) At least [~~fifty~~] eighty per cent of the renewable portfolio standards shall be met by electrical energy generated using renewable energy as the source;
- (2) Where electrical energy is generated or displaced by a combination of renewable and nonrenewable means, the proportion attributable to the renewable means shall be credited as renewable energy; and
- (3) Where fossil and renewable fuels are co-fired in the same generating unit, the unit shall be considered to generate renewable electrical energy (electricity) in direct proportion to the percentage of the total heat value represented by the heat value of the renewable fuels."

"§269-93 Achieving portfolio standard. An electric utility company and its electric utility affiliates may aggregate their renewable portfolios in order to achieve the renewable portfolio standard[-], provided that the share of the electric utility providing electricity service to the Island of Oahu shall not be less than sixty per cent of the total aggregated renewable portfolio standard achieved by this electric utility company and its affiliates."

Thank you for the opportunity to offer these comments.

**TESTIMONY OF CARLITO P. CALIBOSO
CHAIRMAN, PUBLIC UTILITIES COMMISSION
DEPARTMENT OF BUDGET AND FINANCE
STATE OF HAWAII
TO THE
SENATE COMMITTEE ON
COMMERCE, CONSUMER PROTECTION & AFFORDABLE HOUSING
MARCH 28, 2008**

MEASURE: H.B. No. 2550, H.D. 2, S.D. 1
TITLE: Relating to Public Utilities.

Chair Kokubun and Members of the Committee:

DESCRIPTION:

This bill proposes amendments to portions of chapter 269, Hawaii Revised Statutes ("HRS") relating to net energy metering ("NEM"). The bill, among other things, requires the Public Utilities Commission ("Commission) to 1) ensure that a percentage of the total rated generating capacity produced by eligible customer-generators be reserved for electricity produced by eligible residential or small commercial customer-generators, 2) define the maximum capacity for eligible residential or small commercial customer-generators; and 3) evaluate the applicability of generating capacity requirements on an island-by-island basis.

POSITION:

The Commission supports this draft of the bill and offers the following comments.

COMMENTS:

- The Commission appreciates the changes made to this bill by the Senate Committee on Energy and Environment to remove the arbitrary caps that had been proposed in the H.D. 2 version.
- The Commission supports allowing the electric utilities the opportunity to implement the requirements under the Commission's decision and order issued on March 13, 2008, in its proceeding relating to NEM, which increases the maximum allowable NEM cap from 0.5% to 1.0% of the respective utility's system peak demand. This decision and order was filed after an extensive technical and collaborative review process by the electric companies, the Consumer Advocate, Hawaii Renewable Energy Alliance, and Hawaii Solar Energy Association.

- In their respective stipulations with the other parties to the docket, the HECO Companies and KIUC also agreed to allocate 40% to 50%¹ of their system peak demand for small systems that have a NEM generator size of 10KW or less.
 - In addition, the maximum capacity for individual customer generators was increased from 50 to 100kW for the HECO Companies' customers, and remains at 50kW for KIUC customers.
- **The Commission also ordered the HECO Companies and KIUC to 1) expand their IRP planning processes to include studies on the rate and revenue impacts of NEM; reliability, safety, and power quality issues; and the effects, if any, of changes to NEM on the utility's interconnection standards; 2) evaluate the economic effects of NEM in future rate case proceedings; and 3) establish a NEM Pilot Program that will allow a limited number of larger generating units (of up to 500kW or greater) for NEM purposes.**
 - The expanded IRP planning process provides for a regular review of the NEM limits to ensure a sound basis for future decisions regarding NEM.
 - Future rate case proceedings shall include testimony regarding the total economic impact of NEM. This information will allow the Commission to analyze the effect of NEM in greater detail and its impact on revenues, rates, expenses, fuel consumption, and peak demand.
 - The NEM Pilot Program will assist the Commission in evaluating the effects of further increasing the NEM unit size and system capacity limits beyond those established in the decision and order.

Thank you for the opportunity to testify.

¹In its stipulation, KIUC will allocate 50% of its peak demand to the smaller systems. In their stipulation, HECO, HELCO, and MECO agreed to reserve 40%, 50%, and 50%, respectively, of the 1.0% system peaks for small systems.

**Testimony before the
Senate Committee on

Commerce, Consumer Protection, and
Affordable Housing**

H.B. 2550 HD2 SD1 – Related to Public Utilities

**Friday, March 28, 2008
9:00 am, Conference Room 229**

**By Arthur Seki
Director of Technology
Hawaiian Electric Company, Inc.**

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

My name is Arthur Seki – I am the Director of Technology in the Energy Solutions & Technology Department at Hawaiian Electric Company. I am testifying on behalf of Hawaiian Electric Company (HECO) and its subsidiary utilities, Maui Electric Company (MECO) and Hawaii Electric Light Company (HELCO), hereby referred to collectively as the HECO Utilities.

In general, H.B. 2550 HD2 SD1 allows the State of Hawaii Public Utilities Commission (PUC) to reserve a percentage of eligible net energy metering (NEM) customer-generators for residential and small commercial customers. We support H.B. 2550 HD2 SD1.

As you may know, the PUC docket (Docket No. 2006-0084) investigated whether the PUC should:

1. increase the maximum capacity of eligible NEM customer-generators to more than 50 kilowatts;
2. increase the total rated generating capacity produced by eligible NEM customer-generators to an amount above 0.5 percent of an electric utility's system peak demand; and

3. adopt, modify, or decline to adopt, in whole or in part, the NEM standard articulated in PURPA as amended by the Energy Policy Act of 2005.

On September 17, 2007, a stipulated agreement was filed with the PUC which was agreed to by all parties (Hawaii Solar Energy Association, Hawaii Renewable Energy Alliance and Consumer Advocate, and HECO) in the docket. The stipulation proposes to:

- Increases the maximum size of the eligible customer-generator that can qualify for a NEM agreement from 50 kW to 100 kW;
- Increases the total rated generating capacity produced by eligible customer-generators from 0.5% to 1.0% of the utility's system peak demand;
- Reserves 40%, 50%, and 50% of the total rated generating capacity produced by eligible customer-generators for HECO, HELCO, and MECO, respectively, for residential and smaller commercial NEM customers (system sizes of 10 kW or less)—similar to the amendments made in H.B.2550 HD1;
- Utilizes the Integrated Resource Planning (IRP) process to evaluate impacts to the Utilities' systems and determine further adjustments to the NEM system size and cap limits (limits re-examined on an annual basis); and
- Recommends that the Commission not adopt or modify the standard for NEM as articulated in the Public Utility Regulatory Policies Act of 1978 (PURPA) as amended by the Energy Policy Act of 2005.

Productive meetings between the parties to Docket No. 2006-0084 were held to reach a stipulation that proposes increased NEM system size and total rated capacity limits as well as provisions to ensure widespread and fair participation in NEM by smaller customers. These recommendations considered the continued evaluation of operational impacts to the HECO Utilities, including the examination of size and participation limits on an annual basis during the IRP Advisory Group meeting process.

On March 13, 2008, the PUC rendered Decision and Order No. 24089 to Docket No. 2006-0084. In general, the PUC agreed with the stipulated agreement and included several additional terms:

- NEM processes, safety, and reliability on the utility system will be reviewed and addressed in the IRP;
- Economic effects of NEM shall be evaluated in future rate case proceedings; and
- Electric utilities shall design and propose a NEM pilot program for a limited number of participants:
 - Outside of current NEM law (not part of NEM count);
 - Include generating units sizes 100 kW to 500 kW (may consider 500+ kW)
 - Provide update in NEM reports;
 - File with the PUC within 45 days of decision and order date; and
 - Parties and participants can provide comments.

This bill is consistent with the recent PUC decision and order in Docket No. 2006-0084.

Thank you for the opportunity to present this testimony.

Testimony Before the Senate Committee on
Commerce, Consumer Protection and Affordable Housing

By Carey Koide, P.E.
Engineering Manager
Kauai Island Utility Cooperative
4463 Pahee Street, Suite 1, Lihue, Hawaii, 96766-2000

Friday, March 28, 2008, 9:00 a.m.
Conference Room #229

House Bill No. 2550, H.D. 2, S.D. 1 – Relating to Public Utilities

To the Honorable Russell S. Kokubun, Chair; David Y. Ige, Vice-Chair,
and Members of the Committee:

Thank you for the opportunity to testify on this measure. My name is Carey Koide, representing Kauai Island Utility Cooperative. I am here today to testify in support of HB No. 2550, H.D. 2, S.D. 1 relating to Public Utilities and specifically regarding the establishment of Net Energy Metering (“NEM”) limits (aka, NEM Limits) for eligible residential or small commercial customer generators.

KIUC acknowledges and commends the Legislature’s desire to create incentives to promote and, when practical, increase the role of renewable generation. KIUC believes that this measure, as drafted, is consistent with the process KIUC has undertaken with the Hawaii Public Utilities Commission (“Commission”) in Docket No. 2006-0084. Commission has already addressed many of the NEM Limits issues noted in this measure in Docket No. 2006-0084. In this NEM Limits proceeding, KIUC has been diligently working with the Commission, the Consumer Advocate, Hawaii Solar Energy Association (“HSEA”), and Hawaii Renewable Energy Association (“HREA”) to develop reasonable and appropriate NEM Limits for the island of Kauai, particularly in light of KIUC’s unique, electric cooperative structure. A summary of this proceeding is noted below as follows:

- On April 10, 2006, the Commission initiated an investigatory proceeding to determine, among other issues, whether, and to what extent, the Commission should increase (1) the maximum capacity of eligible customer-generators to more than fifty (50) kilowatts (“kW”) (aka, NEM Capacity); and (2) the total rated generating capacity produced by eligible customer-generators to an amount above 0.5 percent of an electric utility’s system peak demand (aka, Percentage Amount), under Hawaii’s existing NEM Law, codified as Hawaii Revised Statutes (“HRS”) §§ 269-101 to 269-111.
- On September 17, 2007, KIUC and the other Stipulating Parties (i.e., the Consumer Advocate, Hawaii Solar Energy Association and Hawaii Renewable Energy Association) submitted their Stipulated Settlement Letter in connection with modifying the existing thresholds or NEM Limits as it pertains to KIUC, as well as their agreements to propose a new mechanism and review process by

which KIUC will ensure the regular and ongoing review of these thresholds or NEM Limits via the existing integrated resource planning process established by the Commission.

- On March 13, 2008, the Commission issued Decision and Order No. 24089 approving, among other things, KIUC's Stipulation to change the NEM Limits (e.g., increase KIUC's total rated generating capacity limit from 0.5% to 1.0% subject to certain stipulated allocations reserved for electricity produced by eligible residential or small commercial customer-generators), and to regularly examine any future changes in NEM Limits in KIUC's existing integrated resource planning process. In addition, to allow the Commission to consider the impact of incorporating more NEM generation and facilitate future Commission decisions concerning NEM, the Commission directed all electric utilities including KIUC to institute a NEM Pilot Program subject to certain parameters, as stated in said Decision and Order.

Thus, through Decision and Order No. 24089 and the existing NEM Law, KIUC believes that the Commission already has the authority to reserve a percentage of eligible NEM customer-generators for residential and small commercial customers. As you are aware, KIUC is a member-owned electric cooperative. Unlike for profit corporations, cooperatives are non-profit and member-run. Without the need for profits and shareholder dividends, cooperatives are free to invest what would normally be profits (cooperatives call them "margins") in the business by allocating margins to the cooperative's members as capital credit contributions, or, eventually, by making patronage capital refunds to its members. As such, the Commission should be allowed the flexibility and authority to modify the existing thresholds, if necessary, after considering salient factors such as KIUC's cooperative structure.

Thank you for the opportunity to testify today representing KIUC.



Hawaii Solar Energy Association

Serving Hawaii Since 1977

TESTIMONY OF THE HAWAII SOLAR ENERGY ASSOCIATION
IN REGARD TO H.B. 2550, H.B. 2, S.D. 1
RELATING TO PUBLIC UTILITIES
BEFORE THE
SENATE COMMITTEE ON CONSUMER PROTECTION
AND AFFORDABLE HOUSING
ON
FRIDAY, MARCH 28,

Chair Kokubun, Vice-Chair Ige and members of the committee, my name is Rick Reed and I represent the Hawaii Solar Energy Assn (HSEA). The HSEA is a professional trade association established in 1977, and affiliated with the Solar Energy Industries Association (SEIA) in Washington, D.C. HSEA represents manufacturers, distributors, contractors, financiers, and utility companies active in the solar energy industry in Hawaii. **The HSEA supports H.B. 2550, H.D. 2, S.D. 1.**

This draft does a few important things. First, it provides the PUC with the latitude to modify, and not simply raise, the total rated generating capacity of eligible net-energy metering customer generators. We believe this may encourage the Commission to raise the current net-energy metering (NEM) limits more quickly given that they will also have the authority to lower NEM limits if any unforeseen problems arise.

Second, the bill provides that a percentage of the total allowable NEM access will be reserved for residential and small commercial generators. While we strongly support this concept, HSEA believes that a better approach is simply to allow residential and small commercial systems up to perhaps 30kw to interconnect without limitation, i.e. small systems should not be counted against any NEM cap levels ultimately established by the PUC.

Third, H.B. 2550, H.D. 2 and S.D. 1, gives the Commission the authority to look at the generating capacity limits on an island by island basis and may exempt a utility from the requirements of this section. This is an important provision given the distinct differences between our numerous utility grid systems.

There is a consensus in Hawaii that we must **greatly accelerate** the pace at which we use renewable energy resources to displace polluting fossil fuels to generate electricity. From the HSEA's perspective our current NEM cap levels remain far too low to make much of a dent in this intractable problem. The game, however, is afoot and the Commission's recent decision in the NEM Docket provides the roadmap.

Thank you for the opportunity to testify.



TESTIMONY OF SUNEDISON, LLC REGARDING HB2550 SD1,
NET ENERGY METERING FOR RENEWABLE ENERGY TECHNOLOGIES
BEFORE THE SENATE COMMITTEE ON
COMMERCE, CONSUMER PROTECTION, AND AFFORDABLE HOUSING
FRIDAY, MARCH 28, 2008

Chair Kokubun, Vice-Chair Ige and Members of the Committee.

SunEdison is a developer of large solar photovoltaic (PV) systems with seven offices in five states. We are a low-cost developer of solar electric resources whose goal is for the benefits of solar energy, particularly the reduction in oil-fired grid-supplied electricity, to be realized in Hawaii. We believe that Hawaii's dependence on oil and the resultant high electricity prices create an excellent opportunity for solar resources. Our commitment to Hawaii includes involvement in PUC proceedings, the legislative process and the acquisition of an Oahu-based solar company. Our projects employ many people, create economic benefits for the host customer and local community, and save all utility ratepayers money.

In our view, Hawaii is at an energy crossroads. Given space constraints, it must be able to take advantage of low-cost renewable energy systems located on customer premises by creating a viable market for larger solar installations. We applaud the Commission for its Decision and Order (D&O) approving two net energy metering (NEM) settlement agreements which provide for increases in NEM caps among other things, however it's important to keep in mind that while the docket was open, oil prices have nearly *doubled* – placing enormous economic pressure on homeowners and businesses alike.

One critical issue to keep in mind is that NEM addresses only economic issues. Safety, reliability, and technical issues are addressed in interconnection standards. Thus, larger systems that may fall within higher NEM caps are still subject to interconnection standards and limitations and will not compromise the integrity of the grid.

SunEdison requests that the Committee reinstate the HD2 version of HB2550 that emerged from the House. For 2008, HB2550 HD2 is roughly equivalent to the Commission's NEM D&O. In subsequent years, HB2550 HD2 establishes reasonable growth in the NEM limits that top out at one MW. Indeed, many states have moved to a 2 MW size limit. Closer to the mark, in 2007, Puerto Rico adopted a cap of one MW, with no aggregate limit – well beyond the policies contemplated by HB2550 HD2.

In addition, HB2550 HD2 provides the Commission with the authority to modify these limits, up or down, based on an independent cost/benefit evaluation. Thus, the PUC maintains control over the future implementation of NEM.

The bottom line for developers of larger PV systems is whether or not there will be a viable market in Hawaii. The D&O provides no assurance of even a future market for larger PV systems. We question whether the extensive administrative process required under the integrated resource planning process in the settlement agreements can occur within a reasonable timeframe to support a viable market for larger customer-sited PV systems. Without the higher NEM limits and best practice interconnection policies embodied in HD2, it is unlikely that there will be any



significant use of solar electric systems by larger customers, and Hawaii would lose the opportunities associated with these systems – i.e. *lower costs, more ratepayer benefits, and more quickly reducing the state's dependence on volatile imported oil.*

Artificially limiting access to larger PV systems for the commercial, industrial, and government sectors at best increases the costs of such installations, such as the Department of Transportation's Request for Proposals for some 34 MW of photovoltaic systems.

We urge the Committee to amend HB2550 SD1 to match HB2550 HD2.

Should the Committee be uncomfortable with this approach, SunEdison suggests, at a minimum, an amendment to HB2550 SD1. We believe it is appropriate for the Commission to have authority to adjust some of the elements of net metering policy for the utilities. The Commission is well-positioned to independently evaluate current information regarding the costs of generating electricity by fossil resources and by renewable resources, costs and benefits of net metering on both participating and non-participating ratepayers, oil prices, and so forth.

As a result, we urge the Committee to make one change. HB2550 SD1 provides the authority to the Commission to evaluate, on an island-by-island basis, the applicability of the generating capacity requirements. HB2550 HD2 also provides similar Commission authority but requires an independent evaluation of the costs and benefits of net energy metering to participating customers and nonparticipating customers. We believe it's important to assure that the Commission's evaluation is both independent and addresses costs and benefits.

Therefore, we alternatively recommend the Committee substitute the following for "evaluate, on an island-by-island basis," in HB2550 SD1:

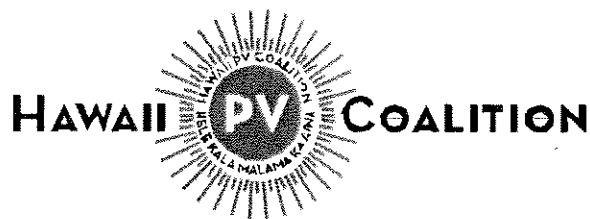
“perform an independent evaluation of the costs and benefits to participating customers and nonparticipating customers, on an island-by-island basis, regarding”

We want to reiterate, however, that our much preferred approach is to amend SD1 to match the HD2 version of this measure.

Thank you for the opportunity to present our viewpoint.

Keith Cronin, President
SunEdison Hawaii

Rick Gilliam
Managing Director, Western States Policy
SunEdison, LLC



TESTIMONY OF THE HAWAII PV COALITION AND THE SOLAR ALLIANCE
IN REGARD
HB 2550, SD1 RELATING TO PUBLIC UTILITIES
BEFORE THE
SENATE COMMITTEE ON COMMERCE, CONSUMER PROTECTION, AND
AFFORDABLE HOUSING
ON
FRIDAY, MARCH 28, 2008 AT 9 AM

Chair Kokubun, Vice-Chair Ige and Members of the Committee

Thank you for the opportunity to testify today. I am Mark Duda and I represent the Hawaii PV Coalition. The Hawaii PV Coalition is a non-profit organization that represents installers, suppliers, manufacturers and customers of solar electric systems in the state of Hawaii.¹ The Solar Alliance is a state-focused alliance of solar manufacturers, integrators and financiers dedicated to accelerating the promise of photovoltaic (PV) energy in the United States.²

The Hawaii PV Coalition and the Solar Alliance supports expanding net metering in Hawaii. We believe by broadening net metering in Hawaii and in conjunction with the current tax credits, Hawaii can reduce dependence on imported energy, create fixed cost reliable energy, and eventually reduce the cost of electricity for the ratepayers. Additionally, expanding net metering will facilitate Hawaiian ability to use its local natural and human resources instead of forcing Hawaiians to buy outside resources.

Net metering allows consumers who generate renewable energy to give the energy back to the grid and get credit for this energy and use this credit later. Net energy metering (NEM) is a little seen but essential component of the regulatory apparatus supporting the adoption of renewable energy. Because the economic and environmental benefits of alternative energy are well established, my testimony is confined to the influence that NEM caps have on the deployment of alternative energy generating capacity in the state.

While we applaud the Commission for its Decision and Order (D&O) approving two net energy metering (NEM) settlement agreements which provide for increases in NEM caps among other things; we are concerned that it does not provide enough certainty that this new industry will be allowed to grow at a significant level. Given the revised IRP process and what appears to be an

¹ The Hawaii PV Coalition, <http://www.hawaiipvcoalition.org/>

² The Solar Alliance, <http://solaralliance.org/>

appetite among all parties to raise the NEM generation caps expeditiously in order to maintain NEM access for Hawaii's homes and businesses, the primary benefit of the proposed legislation is in the clarity of the signal it sends to investor asked to make long-term investments in alternative energy. For businesses, lead times for projects on existing structures are typically 9 months or more. For new construction, lead times are 1 to 2 years. With lead times of this length, our clients in the business community, are very concerned about the availability of space under the cap being available at the point when their projects are complete.

The primary problem with the current situation is the uncertainty it introduces into investment decisions. Customers view having NEM access in the future as a gamble, particularly on Maui and the Big Island. The value of this bill then is in clarifying the availability of NEM, over and above the protections contained in the recent agreement to expand the IRP process. The importance of having this legislation is therefore not to overrule or change what has been done at great effort by the legislature, PUC, and interveners to this point, but rather to offer additional clarity to Hawaii business owners who are funding a substantial portion of the state's shift away from fossil fuels.

Due to this concern, we request that the committee incorporate the HD 2 amendment into this legislation, especially the elimination of the enrollment cap for systems under 10kW (for home and small businesses) and increase the enrollment cap for systems above 10kW incrementally until reaching 5% in 2010. Having the legislature incorporate these suggested enrollment cap increases into the D&O will provide solar businesses the stability they need to create a thriving solar energy market in Hawaii. D&O pilot program that allows for increase the system size cap to 500kW will provide PUC the necessary information for determining whether this increase should be made permanent in the future.

I would now like to address some of the concerns of this legislation.

Regarding stability and reliability of the grid, we believe the stability and reliability of the grid is also extremely important; the utilities have the safety net of interconnection rules to insure a stable and reliable grid.

Regarding concerns for how this will affect the smaller islands, we believe the PUC should have the authority to exempt these islands and believe the language in SD 1 is sound with the underlined addition:

- "Notwithstanding the generating capacity requirements of this subsection, the public utilities commission may evaluate, on an island-by-island basis, the applicability of the generating capacity requirements of this subsection and, in its discretion with perform an evaluation of the costs and benefits to participating customers and nonparticipating customers, may exempt an island or a utility grid system from the generating capacity requirements."

We believe it is important to allow Hawaii to use its own natural resources. Expanding net metering will help Hawaii create fixed cost of energy, reducing the dependence of imported fuels, and expand the use of local natural and human resources, helping to create high-paying job opportunities for the state's residents and turning its abundant sunshine into an energy source for Hawaii.

I would like to thank the Committee for the opportunity to submit testimony and for the Committee's consideration.

Testimony of ERIK KVAM
Chief Executive Officer of Zero Emissions Leasing LLC
2800 Woodlawn Drive, Suite 131, Honolulu, Hawaii 96822
tel: 808-371-1475 e-mail: ekvam@zeroemissions.us

In OPPOSITION to HB 2550 SD 1 RELATING TO PUBLIC UTILITIES

Before the
SENATE COMMITTEE ON COMMERCE, CONSUMER PROTECTION &
AFFORDABLE HOUSING

March 28, 2008 9:00 a.m.

Good morning, Chair Kokubun, Vice-Chair Ige and members of the Committee.

My name is Erik Kvam. I am the CEO of a Hawaii solar power developer called Zero Emissions Leasing LLC (“Zero Emissions”). Zero Emissions was a participant, but not a party in the PUC’s net energy metering (NEM or “net metering”) docket.

Net metering is an incentive for self-generation of electricity. Net metering benefits the customer-generator by obliging the utility to take excess electricity from the customer-generator, to value that electricity at the utility’s retail rate and to refrain from imposing standby charges on the customer-generator.

Net metering is an incentive that works! People in Hawaii want to generate their own solar power because it is cheaper and cleaner than utility power, and they want net metering for their excess electricity. Homeowners, businesses and state agencies – they all want to see the meter run backwards. They want to see the meter run backwards because when it runs backwards, they know they are doing the right thing for themselves, for other people and for the ‘aina.

People – homeowners, businesses, state agencies – want to do the right thing. Net metering encourages them to do the right thing. They want net metering.

But if a large business or a state agency -- like the Hawaii Department of Transportation Airports Division that is going to be the biggest potential customer-generator in the state by this time next year -- wants a net metering for a big solar power system, they’re told they can’t have it.

So they ask, “Why can’t I have it?” And someone – like me, or Keith Cronin of SunEdison, or Brad Albert of Rising Sun -- has to tell them, “You can’t have it because the system you want is too big. It will go over one or both of the limits.”

So they ask, “What are the limits?” And again someone like me has to tell them, “There’s two limits – one on the size of your system, and one on the total size of all the systems on your island put together.

So the conversation with the big potential customer-generator – someone like the Hawaii Department of Education or the Hawaii Department of Accounting & General Services – goes like this:

They ask, “What are these limits for anyway?” And someone like me tells them, “When they started net metering, they were worried that adding a lot of big systems would mess up the grid, and they were worried that the economic benefit to people like you from net metering would impose an economic cost on other ratepayers.”

They ask, “Does adding a lot of big systems mess up the grid?” And I tell them, “No, they don’t mess up the grid. In fact, they improve the performance and reliability of the grid in economically measurable ways called ‘distributed generation benefits.’ In the PUC’s net metering docket, the PUC received evidence that these distributed generation benefits were worth at least 7 cents a kilowatt-hour to the utilities, and none of the parties disputed that.”

They ask, “Would adding my big system mess up the grid?” And I tell them, “No, adding your big system would not mess up the grid. Two years ago, the PUC said, in its distributed generation docket, that the utility has the right and the duty to not let anybody add any system of any size to the grid if the utility thinks that adding the system would mess up the grid. The utility has the authority to not let your system get added to the grid unless and until the utility assures itself that adding your system would not mess up the grid.”

They ask, “Has net metering for big systems messed up the grid anywhere?” And I tell them, “No. Twelve states -- California, Colorado, Connecticut, Delaware, Florida, Maryland, Nevada, New Jersey, New Mexico, Oregon, Pennsylvania and Rhode Island, plus Puerto Rico -- have net metering for systems as big as 1 MW or bigger. There’s not one report that net metering for big systems messed up the grid in any of those places. None of the parties in the PUC docket disputed that either. In fact, none of the parties in the PUC docket put in any evidence that net metering for big systems created any problems for anyone anywhere. ”

They ask, “Do net metering benefits for my big system impose a cost on other ratepayers?” And I tell them, “No. When you add the distributed generation benefits of net metering to the utility’s fossil fuel cost savings from net metering, net metering does not cost anything to the utility or the other ratepayers. The PUC received evidence of that in its net metering docket and none of the parties disputed that.”

They ask, “If adding a lot of big systems does not mess up the grid, and adding my big system will not mess up the grid, and net metering for big systems has not messed up the grid anywhere, and net metering for my big system does not cost anything to the utility or other ratepayers, why can’t I have net metering?” I ask them, “Do you want the short answer or the long answer?” And they say, “Give us the short answer first.”

So I tell them, “OK. The utilities don’t want you to have net metering for your big system.” They ask, “Why doesn’t the utility want me to have net metering for my big system?”

And I tell them, “Because the utility wants you to depend on the utility for electricity instead of encouraging you to generate your own electricity.” They ask, “So these net metering limits have nothing to do with messing up the grid or imposing costs on other ratepayers?”

I say to them, “That’s right.” They ask, “These limits are just about keeping me dependent on the utility and discouraging me from generating electricity for myself?” And I tell them, “That’s about it.”

So they ask, “What’s the long answer? If these net metering limits have nothing to do with messing up the grid or imposing costs on other ratepayers, why can’t I have net metering for my big system?” And someone like me has to tell them, “Because of the process.”

They ask, “What’s the process?” And I tell them, “In its decision in the net metering docket, the PUC created a process that gives the utilities a veto power over increases in the net metering limits for big systems like yours.”

They ask, “Wow, how did that happen?” And I tell them, “It happened because none of the parties in the net metering docket represented people like you that want net metering for their big systems.”

They ask, “How did the PUC give the utilities a veto power over increases in the net metering limits?” And I tell them, “The PUC created the veto by substituting a ‘lowest reasonable cost’ standard in place of the net metering statutory standard of ‘encouraging the greater use of renewable energy’ in the utility decision-making process that the PUC created.”

They ask, “Why does the ‘lowest reasonable cost’ standard give the utilities a veto over increases in the net metering limits?” And I tell them, “Because the excess electricity from your system, valued at the utility’s retail rate under net metering, will *never* be the ‘lowest reasonable cost’ energy available to the utility. In the process, the PUC always will be obliged to affirm the utility’s decision rejecting an increase in the net metering limits for your big system because the utility can always show that net metered excess electricity from your big system is not the ‘lowest reasonable cost’ energy available to the utility.”

They ask, “What’s to keep the utilities from using their veto?” And I tell them, “Nothing. The utilities have a strong economic incentive to use their veto because using their veto increases their revenues from standby charges on your big system and decreases their costs for the excess electricity they take from your big system.”

They ask, “Isn’t that a conflict of interest?” And I tell them, “Yes. The utility is biased because it has a direct and substantial pecuniary interest in the outcome of the case before it. You have a due process right under the 14th Amendment to the Constitution to an unbiased decision-maker. The process violates your right to an unbiased decision-maker under the 14th Amendment.”

They ask, “Am I missing any other constitutional rights in the process?” And I tell them, “Yes. You have no right to be heard in the process. The only persons who may be heard, other than the utilities themselves and the Consumer Advocate, are utility-appointed ‘Advisory Council’ members or utility-determined ‘NEM Industry Representatives.’ The process violates your due process right to be heard under the 14th Amendment to the Constitution.”

They ask, “Anything else I should know about the PUC’s decision in the net metering docket?” And I tell them, “Yes. In taking two years to reach its decision, the PUC did no analysis of any evidence of what the net metering limits could or should be in light of messing up the grid or imposing costs on other ratepayers. The PUC did not obtain any such evidence or any analysis of any such evidence from any of the parties in the docket. The PUC ignored, without doing any substantive analysis, the only such evidence that it did obtain, which showed that adding a lot of big systems does not mess up the grid, that adding any big system will not mess up the grid, that net metering for big systems has not messed up the grid anywhere, and that net metering for big systems does not cost anything to the utility or other ratepayers.”

Finally, they ask, “Do I stand any chance in the process?” And someone like me tells them, “No. You don’t stand a chance. Your only chance is to talk to your legislators.”

That brings us here. Oil is going for more than \$100 a barrel. Hawaii is burning oil for 79% of its electricity. And you have choices in how to proceed.

You can proceed on false assumptions:

- The false assumption that limits on net metering are needed to avoid messing up the grid or imposing costs on other ratepayers
- The false assumption that these limits serve some purpose other than worsening Hawaii’s dependence on imported oil and discouraging the greater use of renewable energy
- The false assumption that, during the last two years, the PUC did any analysis of any evidence of what the net metering limits could or should be in light of messing up the grid or imposing costs on other ratepayers
- The false assumption that the PUC had in mind the role of the customer-generators in achieving the statutory purpose of net metering – “to lessen Hawaii’s dependence on imported oil by encouraging the greater use of renewable energy” – when it OK’ed a process that gives the utilities a veto over future increases in net metering limits, and that denies customer-generators of their constitutional rights to be heard and to an unbiased decision-maker

If you proceed on these false assumptions, then SD1 makes sense:

- SD1 contains no increases in the net metering limits for big systems, doing nothing to reduce Hawaii's dependence on imported oil or encourage the greater use of renewable energy
- SD1 gives the PUC discretion to discriminate against big systems, and authority to *reduce* the net metering limits, inviting PUC action that is likely to worsen Hawaii's dependence on imported oil and discouraging the greater use of renewable energy
- SD1 contains no increases in the net metering limits for big systems, and no net metering eligibility for customer-generators like the Hawaii Department of Transportation Airports Division that purchase solar electricity from systems on their own facilities, reducing or eliminating the cost savings to the State of Hawaii and Hawaii taxpayers from the purchase of such solar electricity

Or you can proceed on the basis of facts:

- That increasing or eliminating the net metering limits does not and will not mess up the grid or impose costs on other ratepayers
- That increasing or eliminating the net metering limits will reduce Hawaii's dependence on imported oil by encouraging the greater use of renewable energy

If you proceed on the basis of facts, then HB 2550 (original text) makes sense:

- HB 2550 increases the customer size limit and eliminates the total generating capacity limit, reducing Hawaii's dependence on imported oil by encouraging the greater use of renewable energy
- HB 2550 also amends the definition of "eligible customer-generator" so that potential customer-generators like the Department of Transportation get net metering and cost savings for big systems located on their facilities.

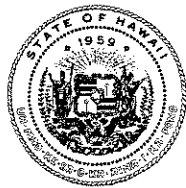
With oil at \$100 a barrel and Hawaii burning oil for 79% of its electricity, this is a dangerous time to be proceeding on false assumptions.

How many years will potential customer-generators like the State of Hawaii have to waste:

- petitioning the PUC to set aside the process, and open a new docket in which the PUC obtains and analyzes evidence from the parties of what the net energy metering limits could and should be in light of the purposes of those limits?
- fighting through a process that gives the utilities a veto over future increases in the net metering limits, before the legislature increases or eliminates those limits?
- fighting through a process that denies them their rights to be heard and to an unbiased decision-maker, before the legislature increases or eliminates those limits?

With oil at \$100 a barrel and Hawaii burning oil for 79% of its electricity, Hawaii can't afford the luxury of proceeding on false assumptions. I urge you to restore the text of HB 2550 as originally introduced and pass it out of this Committee. Thank you for allowing me to testify. I am available for questions.

LATE



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TO THE SENATE COMMITTEE ON COMMERCE, CONSUMER PROTECTION,
AND AFFORDABLE HOUSING

THE TWENTY-FOURTH LEGISLATURE
REGULAR SESSION OF 2008

Friday, March 28, 2008
9:00 a.m.

TESTIMONY OF CATHERINE P. AWAKUNI, EXECUTIVE DIRECTOR,
DIVISION OF CONSUMER ADVOCACY, DEPARTMENT OF COMMERCE AND
CONSUMER AFFAIRS TO THE HONORABLE SENATOR KOKUBUN, CHAIR
AND MEMBERS OF THE COMMITTEE

**HOUSE BILL NO. 2550, HOUSE DRAFT 2, SENATE DRAFT 1 – RELATING
TO PUBLIC UTILITIES.**

DESCRIPTION:

This measure requires the Public Utilities Commission (“Commission”) to reserve a percentage of an electric utility’s total rated generating capacity produced by eligible net-energy metering customer-generators for residential and small commercial customers.

POSITION:

The Division of Consumer Advocacy (“Consumer Advocate”) appreciates the intent of this measure, which provides for greater net-energy metering opportunities for customers of regulated utilities. The Consumer Advocate provides some comments for this Committee’s consideration.

COMMENTS:

Hawaii has an abundance of renewable energy resources that can and should be used to reduce our State's dependence on imported fossil fuels. Net-energy metering programs encourage customers to invest in renewable energy systems by allowing customers who own and operate certain renewable facilities to be paid the utility's retail rate for electricity generated by an eligible customer-generator and fed back to the electric grid.

On March 13, 2008, in Decision and Order No. 24089, the Commission ruled in its net-energy metering docket to increase the allowable customer-generator size to 100 kilowatts and raise the total rated generating capacity to 1 per cent. In addition, the Commission required the electric utilities to design and propose, within 45 days of the Commission's decision and order, a net-energy metering pilot program that will allow the use of a limited number of larger generating units (i.e., at least 100 kilowatts to 500 kilowatts, and may allow for larger units).

The Consumer Advocate supports the State decreasing its dependence on imported fossil fuels by using renewable energy technologies, but cautions against rushing to reach that goal without a proper study to prevent detrimental customer subsidization and system safety impacts. For example, if electric companies are mandated to purchase too much excess energy at retail rates, that cost could adversely impact customers that cannot afford to become a customer-generator. The net-energy metering pilot program, though slowing more wide-spread adoption of customer generation, should help the Commission determine reasonable limits.

The language included in the measure that provides the Commission with the authority to "modify" (instead of merely "increase") the total rated generating capacity and customer-generator size will be helpful in the development and implementation of the utilities' net-energy metering programs. The electric utilities and other stakeholders may be less apprehensive about implementing larger increases if the Commission is authorized to also decrease the amounts in certain circumstances, if some harm, previously unforeseen by the Commission and stakeholders, occurred.

Authorizing the Commission to evaluate the applicability of generating capacity requirements on an island-by-island basis is also a welcomed amendment as the thresholds specified in House Draft No. 2 of the measure may not be reasonable or desirable for all islands, given the relatively small size of certain islands' systems.

Thank you for this opportunity to testify.



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LATE

SENATE COMMITTEE ON COMMERCE, CONSUMER PROTECTION, AND AFFORDABLE HOUSING

March 28th, 2008, 9:00 A.M.

(Testimony is 2 pages long)

TESTIMONY IN SUPPORT OF HB 2550 HD2 SD1

Chair Kokubun and members of the Committee:

The Sierra Club, Hawai'i Chapter, with 5500 dues paying members statewide, supports HB 2550 HD2 SD1, expanding Hawaii's net metering law to foster more home-grown, clean energy.

While we understand that the PUC has recently issued a ruling in their net metering docket, we believe the legislature can accelerate the adoption of photovoltaic and other clean energy devices by increasing the system penetration cap. We also support a policy which would change the manner in which the total amount of net metered energy on the system is calculated to encourage smaller, residential photovoltaic installations. This could be done either directly through statute or through direction to the PUC, as this draft contemplates.

After wisely being passed in 2001, net energy metering slowly began with a handful of renewable energy generators. As more homeowners learn about the program and its impacts on the payback period for renewable energy devices, the subscription rate will increase. In fact, we may be nearing a "tipping point" where many residential customers invest in renewable energy devices because of their relative cost and environmental advantages. House bill 2550 should pick up where prior legislation left off—increasing the total amount of net metered energy on the grid. While we understand that the Public Utilities Commission has a docket open that examines the possibility of increasing the caps, this legislation could remove uncertainty and set out a clear policy on net metering.

The benefits of expanding net energy metering are numerous:

- Private individuals invest in the power plants of tomorrow—instead of ratepayers. Each new installed system can reduce the need to construct massive, expensive power plants, with all of their associated siting, environmental, and financial impacts. Private investors take on the risk of such investments, not ratepayers such as families and businesses.
- Diversified and decentralized power strengthens the power grid, providing more buffering from blackouts, oil price spikes, and accidents.
- Decentralized power reduces the need for ugly powerlines.
- The allowable net energy systems in this program are clean and have less impact on Hawaii's environment than coal and oil-fired powerplants.
- Growth in the renewable energy industry in Hawai'i creates jobs and high-tech business opportunities—diversifying Hawaii's economy.

- A clean kilowatt from photovoltaic systems or other clean energy devices is worth much more for Hawai'i than a dirty kilowatt from one of Hawaiian Electric's oil-fired powerplants. We should ensure that it is given at least as much value on the market.

Please forward an amended HB 2550 HD2 SD1 with a proper start date to expand our statewide net metering program.

Thank you for the opportunity to testify.

HAWAII RENEWABLE ENERGY ALLIANCE

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

HB 2550 HD2 SD1 RELATING TO PUBLIC UTILITIES

March 28, 2008

Chair Kokubun, Vice-Chair Ige and members of the Committee I am Warren Bollmeier, testifying on behalf of the Hawaii Renewable Energy Alliance (HREA). HREA is a nonprofit corporation in Hawaii, established in 1995 by a group of individuals and organizations concerned about the energy future of Hawaii. HREA's 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 HREA's goals is to support appropriate policy changes in state and local government, the Public Utilities Commission and the electric utilities to increase the use of renewables in Hawaii.

The purposes of HB 2550 HD2 SD1 are to: (1) require the public utilities commission to ensure that a percentage of the total rated generating capacity produced by eligible customer-generators be reserved for electricity produced by eligible residential or small commercial customer-generators, (2) allows public utilities commission to define maximum capacity for eligible residential or small commercial customer-generators and (3) evaluate, on an island-by-island basis, the applicability of the generating capacity requirements and, in its discretion, exempt an island or a utility grid system from the generating capacity requirements.

HREA **supports the intent** of this measure, as it is generally consistent with the Public Utilities Commission's Decision & Order ("D&O") No. 24089 on Docket No. 2006-0084, entitled: "Instituting a Proceeding Under Hawaii's Net Energy Metering Law. We have the following comments on the following revisions from the previous version of the bill (HB 2550 HD2):

1. Allowing the PUC to modify, rather than limiting it to only increasing, the total rated generating capacity produced by eligible customer-generators. HREA **supports** this clarification, as the PUC should have the discretion to reduce customer-generator size if appropriate. That said, we do not expect this to be necessary in the near term;
2. Allowing the PUC to define the maximum capacity for eligible residential or small commercial customer-generators, to evaluate, on an island-by-island basis, the applicability of the generating capacity requirements and, in its discretion, to exempt an island or a utility grid system from the generating capacity requirements. We **cannot support** this revision, as we are not clear on its intent. We agree that there should be island-specific solutions, i.e. the PUC should have the discretion determine the appropriate levels of customer-generator and system limits for each island grid. However, we cannot support the phrase "exempt an island or a utility grid system from the generating capacity requirements." We **recommend** this phrase be deleted; and
3. Requiring the PUC to ensure that a percentage of the total rated generating capacity produced by eligible customer-generators is reserved for electricity produced by eligible residential or small commercial customer-generators. We **support** this revision.

Thank you for this opportunity to testify.