

Honolulu, Hawaii

FEB 19 2009

RE: S.B. No. 1675
S.D. 1

Honorable Colleen Hanabusa
President of the Senate
Twenty-Fifth State Legislature
Regular Session of 2009
State of Hawaii

Madam:

Your Committee on Energy and Environment, to which was referred S.B. No. 1675 entitled:

"A BILL FOR AN ACT RELATING TO RENEWABLE ENERGY,"

begs leave to report as follows:

The purpose of this measure is to facilitate and encourage the development of renewable energy development in Hawaii by amending the net energy metering law.

Specifically, this measure:

- (1) Makes net energy metering available to customers leasing or purchasing renewable electricity;
- (2) Prohibits unreasonable denying, burdening, or delaying of net energy metering service requests;
- (3) Increases the maximum allowable capacity of customer generators;
- (4) Removes the calculation of the maximum customer generator total rated generating capacity from being dependent upon utility peak demand;
- (5) Removes the Public Utilities Commission's ability to set generating and maximum capacity, provide exemptions from generating capacity requirements to islands or utility



grid systems, and amend rate structures, standard contracts, and tariffs;

- (6) Enables customer generators to be paid for excess kilowatt-hours without a power purchase contract;
- (7) Ensures validity of net energy metering contracts even if crediting or compensation mechanisms are changed;
- (8) Increases the kilowatts a customer generator may produce before additional requirements may be imposed;
- (9) Directs the adoption of rules to establish best practices interconnection standards for renewable energy generating facilities; and
- (10) Disallows utilities from turning away additional customer generators due to the combined total peak generating capacity of customer generators in the service area.

Testimony in support of this measure was submitted by six private organizations. Testimony in support of the intent, with comments or recommendations, was submitted by two state departments. Testimony in opposition was submitted by one private organization. Comments were submitted by one state department. In particular, there were comments from several testifiers questioning the necessity of compensating customer-generators for annual excess production of energy. Copies of written testimony are available for review on the Legislature's website.

Your Committee finds that, by raising the net metering system cap size, this measure allows commercial customers with larger energy bills to invest in renewable energy systems to reduce their electrical load in the same way smaller commercial customers are currently able to do. Your Committee also finds that, by eliminating the limit on the number of net metering systems, this measure will also provide some certainty to developers or builders who are contemplating installing systems, allowing them to take advantage of net metering.

Your Committee has amended this measure by deleting the requirement that customer-generators be compensated for annual excess production of energy.



191

As affirmed by the record of votes of the members of your Committee on Energy and Environment that is attached to this report, your Committee is in accord with the intent and purpose of S.B. No. 1675, as amended herein, and recommends that it pass Second Reading in the form attached hereto as S.B. No. 1675, S.D. 1, and be referred to the Committee on Commerce and Consumer Protection.

Respectfully submitted on
behalf of the members of the
Committee on Energy and
Environment,



MIKE GABBARD, Chair



The Senate
Twenty-Fifth Legislature
State of Hawaii

Record of Votes
Committee on Energy and Environment
ENE

Bill / Resolution No.:* <i>SB 1675</i>	Committee Referral: <i>ENE, CPN</i>	Date: <i>12 Feb 2009</i>		
<input type="checkbox"/> The committee is reconsidering its previous decision on this measure. If so, then the previous decision was to: _____				
The Recommendation is: <input type="checkbox"/> Pass, unamended 2312 <input checked="" type="checkbox"/> Pass, with amendments 2311 <input type="checkbox"/> Hold 2310 <input type="checkbox"/> Recommit 2313				
Members	Aye	Aye (WR)	Nay	Excused
GABBARD, Mike (C)	✓			
ENGLISH, J. Kalani (VC)	✓			
GREEN, M.D., Josh	✓			
HOOSER, Gary L.	✓			
IHARA, Jr., Les	✓			
KOKUBUN, Russell S.	✓			
HEMMINGS, Fred	✓			
TOTAL	7			
Recommendation: <input checked="" type="checkbox"/> Adopted <input type="checkbox"/> Not Adopted				
Chair's or Designee's Signature: <i>J. Kalani English</i>				
Distribution: Original Yellow Pink Goldenrod File with Committee Report Clerk's Office Drafting Agency Committee File Copy				

*Only one measure per Record of Votes

Report Title:

Net Energy Metering; Renewable Energy; Electricity; Public
Utilities Commission

Description:

Removes the capacity limit for net energy metering and increases eligible customer-generator capacity to one megawatt. Permits existing net metered customers to remain with net metering program once alternative credits or compensation mechanisms are created. Allows an eligible customer-generator to generate up to one hundred kilowatts before the eligible customer-generator must gain public utilities commission approval of safety and performance standards. (SD1)

A BILL FOR AN ACT

RELATING TO RENEWABLE ENERGY.

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

1 SECTION 1. The legislature finds that the State must
2 improve and develop new types of renewable energy to reduce
3 dependence on imported oil to generate electricity.
4 Accordingly, the legislature enacted the net energy metering law
5 as an effective incentive for the rapid development of renewable
6 electricity self-generation at low cost to the public.

7 However, the legislature recognizes that customer capacity
8 and capacity limits have restricted the effectiveness of net
9 energy metering. These limits were established to ensure the
10 safety and reliability of the grid. However, they are no longer
11 needed since the public utilities commission has subsequently
12 established procedures to address these issues, including
13 approval of the technical standard for distributed generation
14 interconnection. Additionally, since that time, it has been
15 recognized that net energy metering imposes no additional costs
16 on the ratepaying public, and accordingly, the total capacity
17 limit no longer serves its purpose, except to reduce the size,

1 slow the speed, and increase the cost of renewable electricity
2 development in Hawaii.

3 The purpose of this Act is to facilitate and encourage the
4 development of renewable energy development in Hawaii, reduce
5 the State's dependence on imported oil, reduce the cost of the
6 State's electricity supply by increasing the consumer capacity
7 limit on net metering, eliminating the total capacity limit on
8 net metering, and permitting existing net metered customers to
9 remain with the program once a feed-in tariff or other tariff
10 structures are implemented.

11 SECTION 2. Chapter 269, part VI, Hawaii Revised Statutes,
12 is amended as follows:

13 1. By amending section 269-101 to read:

14 "**§269-101 Definitions.** As used in this part:

15 "Eligible customer-generator" means a metered residential
16 or commercial customer, including a government entity, of an
17 electric utility who owns and operates, leases, or purchases
18 electricity from a solar, wind turbine, biomass, or
19 hydroelectric energy generating facility, or a hybrid system
20 consisting of two or more of these facilities, that is:

21 (1) Located on the customer's premises;

1 (2) Operated in parallel with the utility's transmission
2 and distribution facilities;

3 (3) In conformance with the utility's interconnection
4 requirements; and

5 (4) Intended primarily to offset part or all of the
6 customer's own electrical requirements.

7 "Net energy metering" means measuring the difference
8 between the electricity supplied through the electric grid and
9 the electricity generated by an eligible customer-generator and
10 fed back to the electric grid over a monthly billing period;
11 provided that:

12 (1) Net energy metering shall be accomplished using a
13 single meter capable of registering the flow of
14 electricity in two directions;

15 (2) An additional meter or meters to monitor the flow of
16 electricity in each direction may be installed with
17 the consent of the customer-generator, at the expense
18 of the electric utility, and the additional metering
19 shall be used only to provide the information
20 necessary to accurately bill or credit the customer-
21 generator, or to collect solar, wind turbine, biomass,

- 1 or hydroelectric energy generating system performance
2 information for research purposes;
- 3 (3) If the existing electrical meter of an eligible
4 customer-generator is not capable of measuring the
5 flow of electricity in two directions, the electric
6 utility shall be responsible for all expenses involved
7 in purchasing and installing a meter that is able to
8 measure electricity flow in two directions;
- 9 (4) If an additional meter or meters are installed, the
10 net energy metering calculation shall yield a result
11 identical to that of a single meter; [~~and~~]
- 12 (5) An eligible customer-generator who already owns an
13 existing solar, wind turbine, biomass, or
14 hydroelectric energy generating facility, or a hybrid
15 system consisting of two or more of these facilities,
16 is eligible to receive net energy metering service in
17 accordance with this part~~[]~~; and
- 18 (6) The utility shall not unreasonably deny, burden, or
19 delay net energy metering service upon request by an
20 eligible customer-generator of the utility."
- 21 2. By amending section 269-101.5 to read:

1 "~~[+]§269-101.5[+]~~ **Maximum capacity of eligible customer-**
2 **generator.** The eligible customer-generator shall have a
3 capacity of not more than ~~[fifty kilowatts; provided that the~~
4 ~~public utilities commission may increase the maximum allowable~~
5 ~~capacity that eligible customer-generators may have to an amount~~
6 ~~greater than fifty kilowatts by rule or order.]~~ one megawatt."

7 3. By amending section 269-102 to read:

8 "**§269-102 Standard contract or tariff; rate structure.**

9 (a) Every electric utility shall develop a standard contract or
10 tariff providing for net energy metering and shall make this
11 contract available to eligible customer-generators, upon
12 request, on a first-come-first-served basis ~~[until the time that~~
13 ~~the total rated generating capacity produced by eligible~~
14 ~~customer-generators equals .5 per cent of the electric utility's~~
15 ~~system peak demand; provided that the public utilities~~
16 ~~commission may modify, by rule or order, the total rated~~
17 ~~generating capacity produced by eligible customer-generators;~~
18 ~~provided further that the public utilities commission shall~~
19 ~~ensure that a percentage of the total rated generating capacity~~
20 ~~produced by eligible customer-generators shall be reserved for~~
21 ~~electricity produced by eligible residential or small commercial~~
22 ~~customer-generators. The public utilities commission may~~

1 ~~define, by rule or order, the maximum capacity for eligible~~
2 ~~residential or small commercial customer generators.~~
3 ~~Notwithstanding the generating capacity requirements of this~~
4 ~~subsection, the public utilities commission may evaluate, on an~~
5 ~~island-by-island basis, the applicability of the generating~~
6 ~~capacity requirements of this subsection and, in its discretion,~~
7 ~~may exempt an island or a utility grid system from the~~
8 ~~generating capacity requirements].~~

9 (b) Each net energy metering contract or tariff shall be
10 identical, with respect to rate structure, to the contract or
11 tariff to which the same customer would be assigned if the
12 customer was not an eligible customer-generator. The charges
13 for all retail rate components for eligible customer-generators
14 shall be based exclusively on the eligible customer-generator's
15 net kilowatt-hour consumption over a monthly billing period.
16 Any new or additional demand charge, standby charge, customer
17 charge, minimum monthly charge, interconnection charge, or other
18 charge that would increase an eligible customer-generator's
19 costs beyond those of other customers in the rate class to which
20 the eligible customer-generator would otherwise be assigned are
21 contrary to the intent of this section, and shall not form a
22 part of net energy metering contracts or tariffs.

1 ~~[(c) The public utilities commission may amend the rate~~
2 ~~structure or standard contract or tariff by rule or order.]~~"

3 4. By amending section 269-105 to read:

4 "**§269-105 Calculation.** The net energy metering
5 calculation shall be made by measuring the difference between
6 the electricity supplied to the eligible customer-generator and:

7 (1) The electricity generated by the eligible customer-
8 generator and fed back to the electric grid over a
9 monthly billing period; and

10 (2) Any unused kilowatt-hour credits for excess
11 electricity from the eligible customer-generator
12 carried over from previous months since the last
13 twelve-month reconciliation period."

14 5. By amending section 269-106 to read:

15 "**§269-106 Billing periods; twelve-month reconciliation.**

16 (a) Billing of net energy metering customers shall be on a
17 monthly basis; provided that the last monthly bill for each
18 twelve-month period shall reconcile for that twelve-month period
19 the net electricity provided by the electric utility with:

20 (1) The electricity generated by the eligible customer-
21 generator and fed back to the electric grid over the
22 monthly billing period; and

1 (2) Any unused kilowatt-hour credits for excess
2 electricity from the eligible customer-generator
3 carried over from prior months since the last twelve-
4 month reconciliation period.

5 (b) [~~Credits~~] Kilowatt-hour credits for excess electricity
6 from the eligible customer-generator that remain unused after
7 each twelve-month reconciliation period may not be carried over
8 to the next twelve-month period."

9 6. By amending section 269-107 to read:

10 "**§269-107 Net electricity consumers.** At the end of each
11 monthly billing period, where the electricity supplied during
12 the period by the electric utility exceeds:

13 (1) The electricity generated by the eligible customer-
14 generator during that same period; and

15 (2) Any unused kilowatt-hour credits for excess
16 electricity from the eligible customer-generator
17 carried over from prior months since the last twelve-
18 month reconciliation period,

19 the eligible customer-generator is a net electricity consumer
20 and the electric utility shall be owed compensation for the
21 eligible customer-generator's net kilowatt-hour consumption over
22 that same period. The compensation owed for the eligible

1 customer-generator's net monthly kilowatt-hour consumption shall
2 be calculated at the retail rate of the rate class the customer
3 is normally assigned to."

4 7. By amending section 269-108 to read:

5 **"§269-108 Net electricity producers; excess electricity**
6 **credits and credit carry over.** At the end of each monthly
7 billing period, where the electricity generated by the eligible
8 customer-generator during the month exceeds the electricity
9 supplied by the electric utility during that same period, the
10 eligible customer-generator is a net electricity producer and
11 the electric utility shall retain any excess kilowatt-hours
12 generated during the prior monthly billing period; provided that
13 the excess electricity generated by the customer-generator, if
14 any, in each monthly billing period shall be carried over to the
15 next month as a [~~monetary~~] kilowatt-hour value to the credit of
16 the eligible customer-generator, which credit may accumulate and
17 be used to offset the compensation owed the electric utility for
18 the eligible customer-generator's net kilowatt-hour consumption
19 for succeeding months within each twelve-month period; provided
20 further that the electric utility shall reconcile the eligible
21 customer-generator's electricity production and consumption for
22 each twelve-month period as set forth in section 269-106. [~~The~~

1 ~~eligible customer-generator shall not be owed any compensation~~
2 ~~for excess kilowatt hours unless the electric utility enters~~
3 ~~into a purchase agreement with the eligible customer-generator~~
4 ~~for those excess kilowatt hours.]"~~

5 8. By amending section 269-110 to read:

6 "**§269-110 [Termination by eligible customer-generators.]**

7 **Eligible customer-generators; termination; alternative credits**

8 **or compensation mechanisms.** If an eligible customer-generator

9 terminates the customer relationship with the electric utility,

10 the electric utility shall reconcile the eligible

11 customer-generator's consumption and production of electricity,

12 including any unused credits for excess electricity from the

13 eligible customer-generator carried over from prior months, for

14 the period following the last twelve-month reconciliation period

15 to the date of termination of the relationship, according to the

16 requirements set forth in this part.

17 If the public utilities commission, at any time,

18 establishes alternative mechanisms for crediting or otherwise

19 compensating eligible customer-generators for exported power,

20 eligible customer-generators with existing net energy metering

21 contracts shall have the option of maintaining these existing

1 net energy metering contracts rather than converting to new
2 alternative credits or compensation mechanisms."

3 9. By amending section 269-111 to read:

4 "**§269-111 Safety and performance standards.** (a) A solar,
5 wind turbine, biomass, or hydroelectric energy generating
6 system, or a hybrid system consisting of two or more of these
7 facilities, used by an eligible customer-generator shall meet
8 all applicable safety and performance standards established by
9 the National Electrical Code, the Institute of Electrical and
10 Electronics Engineers, and accredited testing laboratories such
11 as the Underwriters Laboratories and, where applicable, rules of
12 the public utilities commission regarding safety and
13 reliability.

14 (b) For systems of [~~ten~~] one hundred kilowatts or less, an
15 eligible customer-generator whose solar, wind turbine, biomass,
16 or hydroelectric energy generating system, or whose hybrid
17 system consisting of two or more of these facilities, meets the
18 standards and rules under subsection (a) shall not be required
19 to install additional controls, perform or pay for additional
20 tests, or purchase additional liability insurance.

21 (c) For eligible customer-generator systems of greater
22 than [~~ten~~] one hundred kilowatts, the public utilities

1 commission, either through decision and order, by tariff
2 adoption, or by rule, shall:

3 (1) Set forth safety, performance, and reliability
4 standards and requirements; and

5 (2) Establish the qualifications for exemption from a
6 requirement to install additional controls, perform or
7 pay for additional tests, or purchase additional
8 liability insurance.

9 (d) The public utilities commission shall initiate a
10 rulemaking proceeding by September 1, 2009 to adopt best
11 practices interconnection standards for solar, wind turbine,
12 biomass, or hydroelectric energy generating facilities.

13 Upon adoption, the standards shall become the
14 interconnection requirements of each utility subject to the
15 jurisdiction of the public utilities commission. As part of the
16 rulemaking proceeding, the public utilities commission shall
17 consider:

18 (1) Interconnection standards adopted by other states
19 twenty-four months prior to the rulemaking proceeding;

20 (2) Standards promulgated by the Federal Energy Regulatory
21 Commission; and

1 (3) Model standards developed by nonprofit organizations
2 whose primary purpose is to promote renewable energy.

3 The public utilities commission shall adopt best practices
4 interconnection standards no later than September 1, 2010."

5 10. By repealing section 269-104:

6 [~~"§269-104 Additional customer-generators.~~

7 ~~Notwithstanding section 269-102, an electric utility is not~~
8 ~~obligated to provide net energy metering to additional customer-~~
9 ~~generators in its service area when the combined total peak~~
10 ~~generating capacity of all eligible customer generators served~~
11 ~~by all the electric utilities in that service area furnishing~~
12 ~~net energy metering to eligible customer generators equals .5~~
13 ~~per cent of the system peak demand of those electric utilities;~~
14 ~~provided that the public utilities commission may increase, by~~
15 ~~rule or order, the allowable percentage of the electric~~
16 ~~utility's system peak demand produced from eligible customer-~~
17 ~~generators in the electric utility's service area, whereupon the~~
18 ~~electric utility will be obligated to provide net energy~~
19 ~~metering to additional eligible customer generators in that~~
20 ~~service area up to the increased percentage amount."]~~

21 SECTION 3. Statutory material to be repealed is bracketed
22 and stricken. New statutory material is underscored.

1 SECTION 4. This Act shall take effect upon its approval.



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

LINDA LINGLE
GOVERNOR
THEODORE E. LIU
DIRECTOR
MARK K. ANDERSON
DEPUTY DIRECTOR

No. 1 Capitol District Building, 250 South Hotel Street, 5th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804
Web site: www.hawaii.gov/dbedt

Telephone: (808) 586-2355
Fax: (808) 586-2377

Statement of
THEODORE E. LIU
Director

Department of Business, Economic Development, and Tourism
before the

SENATE COMMITTEE ON COMMERCE AND CONSUMER PROTECTION

Friday, February 27, 2009
9:30 a.m.

State Capitol, Conference Room 229

in consideration of

SB 1675, SD1

RELATING TO RENEWABLE ENERGY.

Good Afternoon, Chair Baker, Vice-Chair Ige, and Members of the Committee.

The Department of Business, Economic Development, and Tourism (DBEDT) generally supports SB 1675, SD1 which amends several provisions of the Net Energy Metering statute (NEM), Section 269-101 through Section 269-111, Hawaii Revised Statute (HRS). DBEDT believes that NEM's is an effective tool in promoting customer-sited renewable energy resources as evident by the significant increases in the number of net energy metered customers across all islands since 2001 when NEM first became a law.

SB 1675, SD1 amends Section 269-101.5 to increase the maximum capacity of eligible customer-generator to one megawatt. While DBEDT supports the intent of this change, we believe that

authorizing the Public Utilities Commission to remove the cap on the size of the eligible customer-generator and to replace it with a limit on a per-circuit basis for some utilities will provide a stronger mandate that will encourage and promote customer-sited renewable energy resources and technologies.

DBEDT strongly supports the elimination of the limit to the total generating capacity produced by eligible customer-generators in Section 269-102.

DBEDT also supports SB 1675's amendment to Section 269-110 allowing eligible customer-generators with existing net energy metering contracts to have the option of maintaining these contracts in the event that the Public Utilities Commission adopts and implements alternative compensation mechanisms such as feed-in tariffs for power (kilowatt-hours) exported to the utility grid by the eligible customer generators.

DBEDT also supports the proposed amendment to Section 269-111 relating to the interconnection standards. DBEDT would like to suggest that in addition to interconnections standards, that the PUC rulemaking also include establishing clear and transparent utility process and procedures for implementing these standards.

Thank you for the opportunity to testify.

WRITTEN ONLY

**TESTIMONY OF CARLITO P. CALIBOSO
CHAIRMAN, PUBLIC UTILITIES COMMISSION
DEPARTMENT OF BUDGET AND FINANCE
STATE OF HAWAII
TO THE
SENATE COMMITTEE ON COMMERCE AND CONSUMER PROTECTION
FEBRUARY 27, 2009**

**MEASURE: S.B. No. 1675 S.D. 1
TITLE: Relating to Renewable Energy**

Chair Baker and Members of the Committee:

DESCRIPTION:

This bill includes various amendments related to Net Energy Metering ("NEM"), by increasing the consumer capacity on net energy metering to not more than one megawatt; eliminating the total capacity limit on net metering, and permitting existing net metered customers to remain with the program if a feed-in tariff or other tariff structures are implemented. This bill also increases the size of systems that would be exempt from having to install additional controls or perform additional tests or purchase additional liability insurance and requires the Public Utilities Commission ("Commission") to initiate a rulemaking proceeding to adopt best practices interconnection standards for solar, wind turbine, biomass, or hydroelectric energy generating facilities, which shall be adopted no later than September 1, 2010.

POSITION:

The Commission has concerns about this bill and offers the following comments.

COMMENTS:

- **The objectives set forth in the measure, may be somewhat premature or unnecessary, given the authority already provided to and being exercised by the Commission.**
- **The Commission has a docket currently pending related to NEM, Docket No. 2006-0084 ("NEM Docket"). The NEM Docket is addressing many of the concerns in this bill, including the cap for individual customer-generators and the total rated generating capacity produced by them.**

- The Commission respectfully submits that this bill would arbitrarily adjust the net energy metering caps without an extensive examination process, similar to that conducted in NEM Docket.
- **With respect to proposed new Section 269-111(d), requiring the Commission to adopt best practices interconnection standards through rulemaking, the Commission questions the need for this language as it has already reviewed and approved net energy metering tariffs of the electric utilities that include interconnection standards or requirements. Accordingly, this added provision may not be necessary.**
 - However, if it is the Legislature's intent to require the Commission to adopt interconnection standards for solar, wind turbine, biomass, and hydroelectric generating facilities by September 1, 2010, the Commission requests the authority to complete this task by "rule or order", due to rulemaking's lengthy process.
- **Finally, the Commission opened a docket in October 2008 to investigate Feed-In Tariffs ("FIT"). During this proceeding, the Commission plans to, among other things, evaluate the roles of other methodologies (i.e. NEM, power purchase agreements, competitive bidding, avoided cost offerings), etc.) for a utility to acquire renewable energy, with or without FIT.**

Thank you for the opportunity to testify.

**Testimony before the
Senate Committee on**

Commerce and Consumer Protection

S.B. 1675 SD1 -- Relating to Renewable Energy

**Friday, February 27, 2009
9:30 am, Conference Room 229**

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

Chair Baker, Vice-Chair Ige and Members of the Committee:

My name is Arthur Seki. I am the Director of Technology for 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). We recognize the Legislature's strong interest in seeing more renewable energy development in the State and are committed not only to supporting renewable energy development but also to conservation and energy efficiency practices to reduce the State's dependence on oil.

We have previously testified in support of a net energy metering (NEM) bills that resulted in:

- Act 272, 2001--led to the state's first NEM law;
- Act 99, 2004--increased the cap from 10 kW to 50 kW
- Act 69, 2005—allowed PUC review and
- Act 104, 2005--allowed the PUC to increase the qualifying system size or enrollment limit by rule or order.

Since the PUC can make modifications to the NEM tariff, by rule or order, we do not think S.B. 1675 SD1 is needed.

The PUC approved changes to NEM in 2008 (Docket No. 2006-0084):

- Increased the maximum size of the eligible customer-generator that can qualify for a NEM agreement from 50 kW to 100 kW;

- Increased the total rated generating capacity produced by eligible customer-generators from 0.5% to 1.0% of the utility's system peak demand;
- Reserved 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);
- Utilized the Integrated Resource Planning (IRP) process to evaluate impact to the utilities' systems and determine further adjustments to the NEM system size and cap limits (limits are re-examined on an annual basis).

With the tremendous growth in NEM activity which was approaching the system cap, the PUC has recently approved:

- Increasing the total rated generating capacity produced by eligible customer-generators from 1.0% to 3.0% of the utility's system peak demand for HELCO and MECO;
- Updating the percentage to 40%, and 40% of the total rated generating capacity produced by eligible customer-generators for HELCO, and MECO, respectively, for residential and smaller commercial NEM customers (system sizes of 10 kW or less).

Thus since the PUC can make modifications to the NEM tariff, by rule or order, and has done so in recent dockets or proceedings, we ask that you defer this bill.

Thank you for the opportunity to testify.

Testimony Before the Senate Committee on
Commerce and Consumer Protection

By Michael V. Yamane P.E.
Senior Electrical Engineer
Kauai Island Utility Cooperative
4463 Pahee Street, Suite 1, Lihue, Hawaii, 96766-2000

Friday, February 27, 2009, 9:30 a.m.
Conference Room # 229

Senate Bill No. 1675, S.D. 1 – Relating to Renewable Energy.

To the Honorable Senator Baker Chair; Senator Ige, Vice-Chair, and Members of the Committee:

Thank you for the opportunity to testify on this measure. My name is Mike Yamane, representing Kauai Island Utility Cooperative (KIUC). I am here today to testify in opposition to S. B. No. 1675, S.D. 1, Relating to Renewable Energy.

KIUC acknowledges and commends the Legislature's desire to maximize the effectiveness of incentives to promote and, when practical, increase the role of renewable generation. However, KIUC respectfully opposes S.B. No. 1675, S.D. 1's removal of the capacity limit for net energy metering and increase of eligible customer-generator capacity to one megawatt because it would unfairly impact KIUC's members/customers.

The removal of the capacity limit and increasing the eligible capacity amount to one megawatt is of particular concern to KIUC because of its electric cooperative structure. Unlike investor-owned or for-profit corporations, cooperatives are non-profit and member-run, in which the customers and the members/owners of KIUC are essentially one in the same. As a cooperative, KIUC is committed to fair and equitable rates for all of its members/customers.

Net energy metering, or NEM, creates a situation in which KIUC's members/customers are required to in effect subsidize the NEM customer. NEM customers may offset energy consumption with energy produced during different time periods which would give rise to a mismatch in pricing signals. In addition, for the energy provided to KIUC by a NEM customer, the NEM customer is credited, or in effect paid, by KIUC at KIUC's full retail price (in other words, at the same retail rate that KIUC charges its customers for the energy it provides). This in effect results in KIUC's other members/customers paying, or subsidizing, that NEM customer for KIUC's unrecovered cost of service related to non-generation investments and operations. By removing the capacity limit for NEM and increasing eligible customer-generator capacity, the potential for the mismatch in pricing signals and unfair subsidies would increase.

KIUC contends that the current NEM law, without the amendments proposed in this bill, already provides for the flexibility that this bill arguably establishes. The Hawaii Public

Utilities Commission (“Commission”) already has the authority to adjust the NEM Limits and even to waive these limitations as they deem appropriate.

Case in point, the Commission has already addressed the issue of NEM Limits as it relates to KIUC in Docket No. 2006-0084. In this docket, KIUC diligently worked with the Commission, the Consumer Advocate, Hawaii Solar Energy Association (“HSEA”), and Hawaii Renewable Energy Association (“HREA”) to develop reasonable and appropriate NEM limits and a process of considering future increases for the island of Kauai, particularly in light of KIUC’s unique, electric cooperative structure.

KIUC believes that the in-depth analysis conducted by the Commission in proceedings such as Docket No. 2006-0084 enables consideration of the impact of differing NEM limits as it relates to specific utilities and other affected entities. This results in equitable and protective limits as opposed to the standardized, across the board applications imposed by S.B. No. 1675. Especially in KIUC’s situation, a careful analysis must be conducted to determine whether and when additional increases in the NEM limits are necessary or prudent under the circumstances after considering, among other things, the need for increases at that time to further facilitate the customer-generator market, impacts on KIUC’s system, and the resulting subsidy impacts especially given KIUC’s cooperative structure.

It is also important to note that the placement of a limit on NEM does not mean that a customer that wants to generate and provide energy to KIUC is prevented from doing so. Other options still remain available. For example, KIUC has a Schedule Q Modified Tariff in place for all qualifying facilities with a design capacity of 100 kW or less. Unlike NEM, in which KIUC in effect is required to pay the NEM customer at the same retail rate that it charges its other customers, a Schedule Q customer is paid for the net energy it provides to KIUC at the costs that KIUC would have incurred had it been required to generate the power itself. Especially in the cooperative situation, KIUC believes that this Schedule Q option is the preferred option, as it avoids the cross-subsidy issue. In other words, instead of KIUC (and in effect, its customers/members) paying a NEM customer at the same rate KIUC charges, KIUC instead pays a Schedule Q customer based on the costs that KIUC would have incurred if it provided that energy on its own.

KIUC’S Strategic Plan sets forth two priorities: (1) to generate at least 50% of our electricity from renewable energy sources by 2023, a goal that will lower KIUC’s greenhouse gas emissions to 1990 levels; and (2) to commit to fair and equitable rates for reliable service. As evidenced by its priorities, KIUC is committed to breaking the State’s dependence on foreign oil and to taking steps to protect our environment but KIUC also needs to ensure the viability of the cooperative for the sake of its members/customers.

In light of the foregoing, KIUC respectfully requests that this bill be held and that any future changes or adjustments to NEM limits remain with the Commission to determine

Testimony on SB No. 1675, SD1

Page 3

Date: February 27, 2008

and adjust on a case-by-case and utility-by-utility basis. Thank you for the opportunity to testify today on behalf of KIUC.



Feb. 27, 2009
Room 229
9:30 AM

Senate
Committee Commerce and Consumer protection
SB1675

Brad Albert
President

Testimony in Support with Changes

Chair Baker and Members of the Committee:

Basis for Testimony

HPVC's member companies are well placed to comment on this particular measure because they install the majority of net-metered PV systems on Oahu, Hawaii Island, and Maui. In addition, HPVC has been a member of the IRP advisory committee for MECO and HELCO regarding the increase in the net energy metering (NEM) caps from 1% to 3% this past year. In addition the HPVC has done extensive community outreach to educate the public about NEM and PV systems as well as other solar technologies and energy efficiency. Many of our individual members are NEM system owners.

HPVC makes the following comments regarding this measure:

HPVC supports SB1675. This bill is wholly in keeping with the public interest and it will accelerate the penetration of renewable energy in Hawaii. The bill has four key provisions:

1. It eliminates the 'system wide' or 'demand share' caps that are currently 1% for KIUC and HECO, and 3% for MECO and HELCO. It is important to note that this does not subject these grids to stability or reliability issues because the utility always controls a customer-generator's ability to interconnect a system to the grid. If interconnecting a particular system poses problems to the grid, the utility may prevent it from being connected until appropriate safeguards are in place.

Currently the concept of a limit on the number of NEM systems is a roadblock to developers and investors as there is uncertainty that NEM share will be available. In addition our member companies are never certain that they will be able to continue selling systems as evidenced on Kauai where NEM limits were reached last year and not raised. In fact on Maui the cap was raised from 1% to 3% on Dec 26th, 2008 less than one month from when the cap would have been reached. This type of uncertainty is counter the states goals of encouraging the adoption of renewable energy. Ultimately Hawaii should be sending a message not to limit the # of systems but a target a meaningful amount or unlimited number of systems.

The Sun At The Source Of Life
Mary Kawena Pukui

Post Office Box 81501, Haiku HI 96708

P 808 579 8288
F 808 575 9878

info@hawaiiivcoalition.org
www.hawaiiivcoalition.org



2. It raises the NEM system size cap from 100 kW to 1 MW. **We believe that this cap should be raised, but we recommend 500kW (larger systems would fall into a feed in tariff or other rate structure).** Raising this cap will substantially accelerate the adoption of renewable energy in Hawaii by providing an incentive for larger power users to invest in renewable energy system.
3. It ensures that customer-generators under net metering contracts will never be switched against their will to other tariffs against their will. This is important because a number of additional tariff regimes are being proposed that could alter the financial performance of investments in net-metered renewable energy systems. These include the feed-in tariff and time-of-use rates.
4. It compensates the NEM customer generator for excess power generation at the end of a 12 month period. This provision should be made retroactive to all current NEM customers as well as new NEM customers. We agree that the customer be compensated, **but we believe that the rate should not be at the retail rate, but a lower rate comparable to other power purchase agreements or feed in tariffs.** This would encourage customers to offset 100% of their power knowing that they would receive some form of compensation where they to overproduce, yet not encouraging them to purposefully oversize their system. This provision encourages NEM customers to install larger systems meeting the Hawaii's goal of more non-imported renewable energy.

HPVC's position on NEM in general is that customers should always have NEM as an option (up the point where interconnecting additional systems can be shown to destabilize the utility grid). When NEM without artificial restrictive caps is in place, power users have a substantial incentive to install more generating equipment than they need to merely offset their instantaneous daytime usage. By making NEM available to more customers through expansion of both the system-wide and system size caps, SB1675 will induce more firms to install renewable energy systems and reduce their demands on the power grid. This is an important step that will help enable the state to reach its ambitious clean energy goals.

The Sun At The Source Of Life
Mary Kawena Pukui

Post Office Box 81501, Haiku HI 96708

P 808 579 8288
F 808 575 9878

info@hawaiiivcoalition.org
www.hawaiiivcoalition.org



About the Hawaii PV Coalition

Hawaii PV Coalition (HPVC) was founded in 2006 and is comprised of more than 30 installers, distributors, manufacturers and financiers of Photovoltaic (PV) NEM systems, many of which are Hawaii based, owned and operated. The Hawaii PV Coalition also has non-industry businesses and homeowners who are support solar as members. HPVC was formed to actively promote the solar electric agenda across our islands. Working with legislators, government agencies, utility companies, and public interest groups, the Coalition is pushing to make Hawaii more energy independent while creating more jobs in the renewable energy sector.

The Sun At The Source Of Life

Mary Kawena Pukui

Post Office Box 81501, Haiku HI 96708

P 808 579 8288

F 808 575 9878

info@hawaiipvcoalition.org

www.hawaiipvcoalition.org



SIERRA CLUB

HAWAI'I CHAPTER

P.O. Box 2577, Honolulu, HI 96803
808.538.6616 / hawaii.chapter@sierraclub.org

SENATE COMMITTEE ON COMMER AND CONSUMER PROTECTION

February 27, 2009, 9:30 A.M.

(Testimony is 1 page long)

TESTIMONY IN SUPPORT OF SB 1675 SD1

Aloha Chair Baker and members of the Committee:

The Sierra Club, Hawai'i Chapter, with nearly 5500 dues paying members statewide, supports SB 1675 SD1, removing the capacity limit for net energy metering. This bill furthers the policy preference for renewable energy and encourages "mom and pop" stores to invest in our future.

By allowing net energy customers to increase the amount of energy put back into the grid, this bill allows commercial entities to participate in "spinning down" their meter. Currently, the net metering standards are set primarily for smaller power users (such as residential units). A larger commercial entity was limited on how much energy it could provide to its utility (and correspondingly reduce its bill). This small change could have a large impact on the adoption of renewable energy by providing an incentive for larger power users to invest in PV or wind systems.

Thank you for the opportunity to testify.



SENATE COMMITTEE ON COMMERCE AND CONSUMER PROTECTION

February 27th, 2008, 9:30 A.M.

Room 229

(Testimony is 2 pages long)

TESTIMONY IN STRONG SUPPORT OF SB 1675 SD1

Chair Baker and members of the committee:

The Blue Planet Foundation strongly supports Senate Bill 1675 SD1, expanding Hawaii's successful and popular net energy metering law to foster more home-grown, clean energy.

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 has dramatically increased. In fact, we may be nearing a "tipping point" where many residential customers invest in renewable energy devices because of their relative cost (see image on the second page of this testimony) and environmental advantages.

Senate Bill 1675 SD1 picks up where prior legislation left off—increasing the total amount of net metered energy on the grid. This measure accomplishes the following:

- Eliminates the system cap, allowing more customers to plug in to the grid and run their meters backward.
- Increases the allowable system size on the grid from 100kW to 1 MW, allowing larger systems to net meter. This is similar to what California and other states have enacted. Similarly, Arizona has no system size caps, but they limit the size to 125% of customer's total connected electric load. This ensures that customers don't purposely oversize their systems and take advantage of net energy metering instead of becoming independent power producers.
- Clarifies that net metering benefits will continue.

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

Jeff Mikulina, executive director • jeff@blueplanetfoundation.org

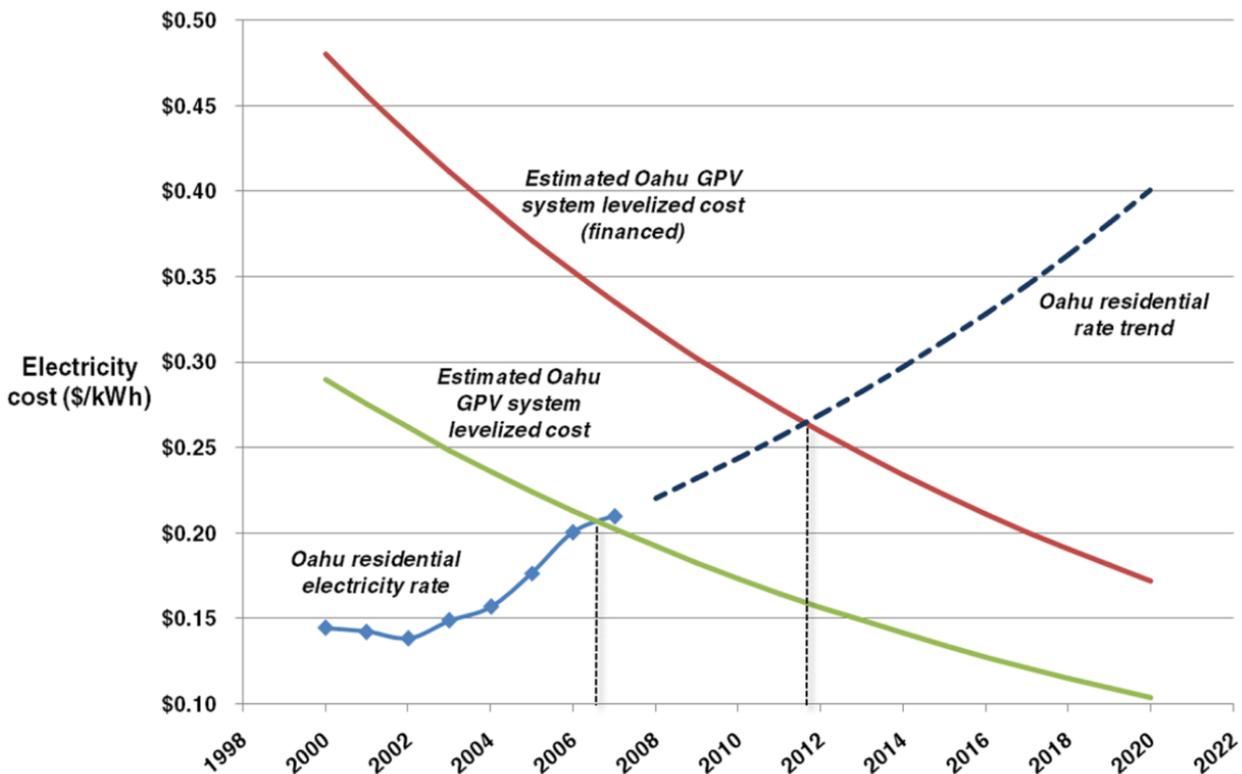
55 Merchant Street 17th Floor • Honolulu, Hawai'i 96813 • 808-954-6142 • blueplanetfoundation.org

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 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 fossil fuel-fired powerplants. We should ensure that it is given at least as much value on the market.

Senate Bill 1675 SD1 will help accelerate the adoption of photovoltaic and other clean energy devices by increasing the availability of net energy metering in Hawai'i.

Thank you for the opportunity to testify.



Estimated cost trends of grid electricity versus residential photovoltaic electricity over time