

BEFORE THE
PUBLIC UTILITIES COMMISSION
OF THE STATE OF HAWAII

In the matter of) HAWAIIAN ELECTRIC COMPANY, INC.) For Approval and/or Modification of) Demand-Side and Load Management) Programs and Recovery of Program Costs) And DSM Utility Incentives.)	DOCKET NO. 05-0069 (Energy Efficiency Docket)
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THE HAWAII SOLAR ENERGY ASSOCIATION'S
RESPONSES TO PARTY AND PARTICIPANT INFORMATION REQUESTS ON
HSEA'S FINAL STATEMENTS OF POSITION

AND

CERTIFICATE OF SERVICE

The Hawaii Solar Energy Association (HSEA) hereby files its responses to the Information Requests submitted by the various parties and participants in regard to the HSEA's Final Statement of Position in accordance with the Schedule of Proceedings in the Public Utilities Commission Docket No. 05-0069, as amended by the Consumer Advocate in a letter to the Commission dated June 21, 2006.

HSEA RESPONSE

a. HSEA agrees that there are energy savings, but they are nominal. Pursuant to HECO's RNC program requirements, for an 80 gallon water heater to be considered "high efficiency" (80 gallon heaters are required for the tank and timer program) it must have an "energy factor, or EF" of no less than .88. A "standard" 80 gallon water heater typically has an EF of .86. Based upon Oahu's average groundwater temperature, a temperature rise of 55°, an average daily load of 64 gallons, and current (July, 2006) residential electric rates, the "high efficiency" electric heater will "save" homeowners 6.79 kWh, or a scant \$1.36 a month (Compare these nominal energy savings with the average Oahu solar system at \$187.5 kWh, or \$37.33 a month).

HECO pays the participating homeowner \$60.00 a year for annualized energy savings of 81.5 kWh, or \$16.32 in actual dollar savings. The incremental cost of the high efficiency heater to the homeowner is approximately \$55 – 60 more than the "standard heater". This incremental cost is recouped in year one through monthly billing credits, although the billing credit itself extends indefinitely.

HSEA does not dispute that the tank and timer option provides capacity deferral benefits. A properly designed and functioning solar system can provide equivalent capacity benefits. The HSEA's concern is simply this: once an electric heater is installed in new construction it tends to stay installed. Over the past nine years only 18% of the homeowner's that have installed either the high efficiency electric heater or the tank and timer option have subsequently converted to solar. When compared with the benefits of solar water heating systems, electric water heaters are "high efficiency" in name only. They save very little energy, but they do provide capacity benefits when installed with a "lock out" timer. All the evidence indicates that when such heaters are installed in new construction they add load to the system (both off peak and on) and impede the installation of solar water heaters going forward.

b. Changes in Hawaii's solar rights law (HRS 196-7, as amended by H.B. 1017, H.D. 3, S.D. 2, C.D. 1, Hawaii State Legislature, 2005) have eliminated the major impediments to the installation of solar water heating systems in all single family detached residences and townhouses. Apartments and condos are another matter.

HECO approved high efficiency water heaters installed in these retrofit applications provide nominal capacity benefits, i.e. the heaters are installed without a “lock-out” timer, and the heating element(s) will likely be on during the system peak. Per the assessment above, the energy savings also will be minimal. Customer equity considerations may warrant rebates for this tier of customers despite the minimal savings.

HECO/HSEA-FSOP-IR-102

Ref: HSEA FSOP, page 12. “1) We propose the immediate establishment of a joint industry – utility working committee.”

- a. What does the HSEA envision the purpose of this committee would be?
- b. Would its decision be binding on the solar industry, the utility DSM program, and/or any third party DSM program?
- c. How would its decisions be enforced?

HSEA RESPONSE:

- a. Please see our FSOP at pages 12 -13.
- b. HSEA has recommended that the committee’s decisions and rulings would be made by consensus. We therefore envision that its deliberations would be binding on the parties.

c. At this time we anticipate that the decisions and rulings would find their way into the basic REWH and RNC governing program documents, the standards and specifications, and the participating contractor contract agreement with the company.

HECO/HSEA-FSOP-IR-103

Ref: Load Management Programs

Does HSEA support utility administration of load management programs?

HSEA RESPONSE:

Yes, but with a large caveat reflecting our continuing unease with portions of the RNC program. Whatever the original RNC goals and objectives, the RNC tank and timer and high efficiency electric heater programs **are** building load, both on and off peak. This comes in the context of shrinking severe reserve margins and our aging generation infrastructure.

The comparison of high efficiency electric heaters with standard water heaters is inappropriate. Both of these water heaters consume an enormous amount of energy in the process of heating water, whether on or off peak. Residential electric waters of all types drive the evening peak load. In the context of this docket, HSEA believes the proper metric is to compare the energy and capacity

benefits of any electric water heater with those provided by solar water heaters.

HSEA believes that while HECO is entitled to a fair rate of return on capital, they are not entitled to load growth. Given that there have been relatively few conversions from the high efficiency electric heater option (Only 10% of 3,902 heaters installed have converted to solar. These electric heaters provide only nominal capacity benefits) to solar during the nine year program history, HSEA is very concerned that crediting customers \$3.00 a month to “lock out” the heating element(s) in times of system crisis simply sends the wrong message. Electric water heaters, high efficiency, standard or whatever, drive peak load on Oahu; electric water heaters per se are the problem. Electric water heaters are energy hogs on or off peak.

The RNC program provides incentives for the installation of electric water heaters that consume far more energy than any other household appliance while impacting the generation infrastructure and peak load (non-timer installations). The Energy Scout program provides customer incentives to “lock out” many of these same heaters during system crises that may have been averted if the heaters were not installed in the first place.

This is bizarre logic indeed. The HSEA opposes DSM incentives and rebates that build load and require load management at the same time. HSEA is fully cognizant that the Company faces a severe reserve margin shortfall and that load management represents a key near-term resource, but aspects of the RNC program as presently constituted contribute to the very problem load management is designed to address. The RNC program needs realignment.

TGC-All-FSOP IR-1

Ref.: Issue 1 Whether energy efficiency goals should be established and if so, what the goals should be for the State.

The various types of energy sources each have their own set of attributes, usually both positive and negative, in contributing to the state's overall energy picture.

- a. Should increasing the diversity of energy sources/alternatives be included as part of any energy efficiency goals? Please explain why or why not.
- b. Should the process of identifying energy efficiency goals take into consideration the different scenarios, e.g., natural disasters, shipping disruptions, local refinery problems, etc., under which energy is, and will be, needed? Please explain why or why not.
- c. For each energy goal to be identified/adopted, should the definition of "efficiency" and the methodology adopted to quantify such "efficiency" differ? If "yes", how does/will each goal account for such difference, and, if "no", what is the common definition of and methodology to be used to define and quantify each goal's efficiency?

HSEA RESPONSES:

- a. Yes, to the extent that such resource "diversity" results from increased **end-use** energy efficiency measures.

c. Please see our response to (b.) above.

capacity values deferred? If so, does HSEA have any specific recommendations?

HREA-HSEA-IR-4.

On page 14, regarding how DSM might be more cost-effective in Hawaii, would HSEA agree that the best way to reduce administrative costs would be to competitively bid out DSMs? If not, why not?

HREA-HSEA-IR-5

On page 16, as an alternative to energy efficiency portfolio standards, HREA has suggested a broader DSM portfolio standard (DPS). DPS would include energy efficiency, conservation, renewable displacement technologies, such as solar hot water (SHW), and other customer-sited renewables, such as PV and wind, and load management technologies. Could HSEA support this approach where, effectively, DSM renewables would be counted towards the DPS, instead of the RPS?

HSEA RESPONSES:

1. HSEA believes that 1% would be an acceptable energy efficiency standard, assuming that displacement renewables remain within the RPS.
2. HSEA would have continuing concerns. We do not believe that it has been conclusively demonstrated in our discussions to date that third-party implementation of **all** DSM programs is either sensible or warranted.

connection with the above, the following summarizes KIUC's understanding of the consensus reached by the parties/participants present at the May 11, 2006 settlement meeting, including HSEA, on four of the five issues established for this proceeding as they pertain to KIUC, together with some background on each issue:

Docket Issue No. 2: What market structure(s) is the most appropriate for providing these or other DSM programs (e.g., utility-only, utility in competition with non-utility providers, non-utility providers)?

Consensus: As it pertains to KIUC, an electric cooperative essentially owned by its customers, there should be no change to the market structure by which KIUC currently develops and administers its DSM programs, provided that, as recommended by HREA and agreed upon by KIUC, KIUC hire a DSM consultant and/or consult with a third party or fund administrator if and when appropriate.

Background:

- Under the current structure, KIUC, at its discretion, either conducts its own DSM/energy services programs or contracts it out to a third party as appropriate. During the meeting, KIUC stated that this structure best supports the

stated that they believe that these small markets can best be served with energy efficiency programs that combine DSM programs with other energy service programs.

- KIUC also stated that the commercial programs are an integral part of its Commercial Enhanced Energy Services offering and Key Accounts program, through which solutions to commercial customer's high-energy costs are achieved through a mix of DSM-type measures with other energy service-type measures, such as power factor correction.

Docket Issue No. 3: For utility-incurred costs, what cost recovery mechanism(s) is appropriate (e.g., base rates, fuel clause, IRP Clause)?

Consensus: As it pertains to KIUC, KIUC should be able to recover its utility-incurred costs from its members and customers via cost recovery mechanisms that are deemed most appropriate for KIUC's situation and cooperative structure.

Background: As a not-for-profit, member-owned cooperative for which the traditional rate base method of ratemaking is not applicable, KIUC anticipates working with the Commission and the Consumer Advocate at some point in the future to determine the most appropriate cost

mechanism be. For the same reasons as Docket Issue No. 3, it is our understanding that the parties present agreed that this issue does not apply to a not-for-profit, member-owned cooperative such as KIUC.

Docket Issue No. 5: Whether DSM incentive mechanisms are appropriate to encourage the implementation of DSM programs, and, if so, what is the appropriate mechanism(s) for such DSM incentives?

Consensus: As it pertains to KIUC, the use of financial incentives to facilitate the pursuit of DSM programs are not applicable to KIUC. KIUC's ratepayers and shareholders are essentially one and the same, and as such, any financial incentive charged to the ratepayers to benefit the shareholders is essentially a charge that will be returned to the ratepayers (aka shareholders).

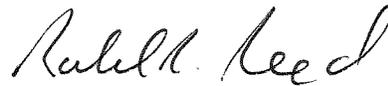
In addition, with respect to Docket Issue No. 1 (Whether energy efficiency goals should be established and if so, what the goals should be for the State), it is also KIUC's understanding that, during prior discussions amongst the parties, an agreement was also reached that energy efficiency goals should not be established, as it pertains specifically to KIUC.

Please confirm whether KIUC's understanding of the above consensus is correct, as they apply to KIUC. If not, please explain why KIUC's understanding is incorrect.

HSEA REPOSE:

HSEA stipulates that KIUC's understanding of the consensus view is essentially the same as our own.

Dated: July 14, 2006, Honolulu, HI.



Richard R. Reed, President HSEA

CERTIFICATE OF SERVICE

I hereby certify that I have this date served a copy of the foregoing information requests upon the following parties and participants via electronic mail and postage prepaid to each of the parties and participant's respective addresses as set forth below:

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