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October 10, 2006

The Honorable Chairman and Members of
the Hawaii Public Utilities Commission
465 South King Street
Kekuanaoa Building, First Floor
Honolulu, Hawaii 96813

Subject: **Docket No. 03-0371**
Proceeding to Investigate Distributed Generation in Hawaii

Dear Chairman and Commissioners:

The U.S. Combined Heat and Power Association ("USCHPA") respectfully submits its comments on the proposed standby rates of the operating utilities Hawaiian Electric Company ("HECO"), Maui Electric Company ("MECO"), and Hawaiian Electric Light Company ("HELCO"), collectively referred to herein as HECO. USCHPA is the national association of companies, organizations, and individuals who recognize the benefits and seek to increase the use of combined heat and power ("CHP") and clean distributed generation ("DG") throughout the U.S. economy. Our membership includes 65 corporate members, representing manufacturers of equipment used for CHP, installers, users, consultants and engineering firms, as well as non-profit environmental and public-interest groups who recognize and seek the important efficiency, environmental, and reliability benefits offered by CHP and clean DG. In addition, we have 480 individuals on our membership rolls. USCHPA is not a party in this proceeding and therefore offers its comments as an "*amicus*" to the Commission.

USCHPA has participated in numerous state and federal proceedings on distributed generation since it was established in 1999. We applaud the HPUC for its leadership and encouragement of DG/CHP, and we wish to share our perspectives and knowledge gained over the past seven years. Our specific comments are presented below. Other states' experience and our perspective on rate treatment are presented in Attachment B.

General Comments

The rate proposed by HECO is unjustified by the factual record, will unduly discriminate against customers who install on-site generation relative to other

similarly situated customers and will serve only to prevent customers from installing on-site generation. By blocking these investments, the rate will deprive other Hawaii ratepayers from the benefits of customer-sited generation, from T&D deferral to reductions in greenhouse gas emissions (to name a few). We strongly recommend that the Commission reject the proposals, at least until such time as an open and generic proceeding can be undertaken that factors in both the costs and benefits of on-site generation on the utility system, fully evaluates on-site generation customers relative to similarly-situated customers and incorporates considerations of the impacts on other rate classifications (e.g., in the context of a full, rather than "single-issue", rate case).

Specific Comments

The end-user should have the option of providing its own backup service and be allowed to either take or not take standby service and in amounts it deems necessary.

- As an alternative to taking standby service, the end-user should have the option to shut down its operations if its DG becomes non-operational or provide its own backup power with emergency generation until its DG unit comes back on-line. The end-user may even elect to shift its operations to take standby service during the non-peak and shoulder peak periods.

The proposed tariffs make self-generation projects economically infeasible.

- Comparing the demand charges alone from the proposed tariffs on a per kilowatt hour basis to the existing average rates advertised by HECO on its web-site for the same customer classes J and P, no customer could afford to pay for standby service as proposed and pay its own system costs of self-generation and interconnection. The results would not be competitive with merely continuing to accept utility service.
- HECO's estimates of the hours per month a customer in the J and P classes of service would operate, the costs of the proposed standby service alone, and when compared to utility service, leaves a marginal per-kWh value insufficient to cover the capital and operating costs of typical self-generation equipment, Attachments A1. Finally, for illustrative purposes, when the energy charge is added to the reservation and demand charge components, the proposed tariffs are either more than utility service or of such a small difference that DG/CHP could not compete (Attachment A2).

The "demand ratchet" based on the lesser of the highest customer demand in the preceding twelve months or the capacity of the DG unit, is both onerous and punitive.

- A customer installs DG for economic and reliability reasons. The units are

expected to operate with high availability factors. To be slapped with a demand ratchet for twelve months is an incredibly strong disincentive to end-users. They should only pay for service used. The Commission should also consider, as was done by Connecticut, eliminating backup rates if the DG unit is available during peak periods (see Attachment B).

- A standby rate such as proposed by HECO implicitly assumes that a marginal reduction in demand imposes marginal costs upon the utility which must be recovered through marginal revenues to the utility. This is inconsistent with HECO's other rates, which presume that a marginal increase in demand imposes marginal costs upon the utility which must be recovered through marginal revenues. This is a flaw common to all standby rate arguments, and can be resolved only by considering standby rates as a part of a full-blown rate case rather than as a "single issue" such as has been proposed.

The basis for the reservation charge component of the standby charge is flawed. This component should be rejected, or as a minimum, substantially revised.

The proposal to establish the monthly reservation demand charge at the highest peak customer demand for the prior year or the maximum capacity of the customer's self-generation equipment is unjustified for the following reasons.

- The use of the maximum capacity of the customer's self-generation equipment as an alternate set point for the reservation demand charge is unjustified. Customers should always be permitted to determine the maximum standby demand they seek, subject to penalties for exceeding that demand. If a customer elects to install more capacity than it expects ever to require from the utility, to cover future growth or provide extra reliability through redundancy, that is the customer's and not the utility's business. This is the approach New York State took after a lengthy public hearing that factored in the perspectives of all affected parties.
- The proposal to include in the "reservation demand charge" the electrical equivalent of any thermal energy the customer derives from its self-generation equipment is an unjustified attempt to pump up the demand charges that can be levied on self-generators who use combined heat and power technologies. Does HECO bill its non-self-generating customers a monthly demand charge for the electrical equivalent of any thermal energy equipment such as boilers or direct-flame processes or thermally-activated chillers that they may use? Certainly they do not, and this is a transparent attempt to block on-site generation and/or compensate HECO shareholders at the expense of customers who install on-site generation.
- If revised, the tariff needs to be clear that service provided during scheduled maintenance will not set the reservation charge.

The tariff should be flexible with respect to scheduled maintenance.

- No basis is provided for the limitations imposed in the tariff on the extent of scheduled maintenance, limiting it to not more than two periods per year, and not more than a cumulative three weeks per year for any non-utility power source. It might take longer to conduct a major service or replacement. If the utility is presented adequate notice of scheduled maintenance (the proposed two weeks is extreme) it should be able to accommodate any customer's maintenance requirements for any length of time.

There is no justification for a requirement that the utility install and maintain a meter on the customer's generator at the customer's expense, but at a place on the customer's premises approved by the utility and accessible at all times.

- This is intrusive, burdensome, and pointless. If the utility cannot tell from its own revenue meter when a self-generator is or is not generating, it does not need to know. In its belt-and-suspenders logic, HECO would both continuously charge self-generators for their maximum possible demand on its system, and also require them to provide information and perform practices to assure that they would never in fact impose that demand on its system.

There is no cost basis or other justification for six months of reservation demand charges for early termination of the standby contract by a customer.

- In context of our earlier comments about the basis and need for a reservation charge, this provision is yet another provision designed to be so punitive that no one would enter such a contract in the first instance.

Conclusion

USCHPA urges the Commission to reject the proposed tariffs in their entirety and require the companies to resubmit tariffs that are fair, balanced, and non-discriminatory as between those customers who do and do not self-generate. We believe our comments above and in Attachment B are sufficient for the PUC to rule on the need for standby rates. However, as a procedural next step, the PUC could direct the filing utilities to respond to all matters in our comments and from those of other parties that raise substantial question as to the proposed tariffs being just, reasonable, and non-discriminatory. This step would set the stage for in-depth hearings.

Should the Commission wish to pursue hearings, we would strongly recommend they do so in an open, generic hearing that takes into full consideration all the costs and benefits of on-site generation relative to similarly situated customers and to do so in the context of a full rate case, the better to allocate marginal costs

and benefits to those who impose same. Any acceptance of standby rates short of such a proceeding is bound to be incomplete, and likely to be unduly discriminatory towards affected ratepayers.

We are pleased to submit our comments.

Respectfully submitted,

A handwritten signature in cursive script that reads "Bruce A Hedman".

Bruce Hedman
Chairman

[Copy mailed to parties on the Certificate of Service List.]

ATTACHMENT A1: ESTIMATED COSTS OF PROPOSED HECO STANDBY RATES

	Reservation Demand Charges		Hours/Mo.*		Reservation Demand Charges/kWh		PS	J
	Schedule J	Schedule PS	J	PS	Schedule J	Schedule PS		
HECO	\$8.97	\$11.25	300	540	\$0.0299	\$0.0208		
MECO - Maui	\$9.34	\$10.29	300	540	\$0.0311	\$0.0191		
MECO - Molokai	\$10.86	\$6.33	300	540	\$0.0362	\$0.0117	529000	34500
MECO - Lanai	\$9.70	\$13.68	300	540	\$0.0323	\$0.0253	975	115
HELCO	\$13.86	\$14.62	300	540	\$0.0462	\$0.0271	542.5641	300
							18.08547	10

	Daily Demand Charges		Hours/Day*		Daily Demand Charges/kWh	
	Schedule J	Schedule PS	J	PS	Schedule J	Schedule PS
HECO	\$0.30	\$0.38	10	18	\$0.0300	\$0.0211
MECO - Maui	\$0.51	\$0.63	10	18	\$0.0510	\$0.0350
MECO - Molokai	\$0.97	\$0.53	10	18	\$0.0970	\$0.0294
MECO - Lanai	\$0.71	\$1.09	10	18	\$0.0710	\$0.0606
HELCO	\$0.73	\$0.88	10	18	\$0.0730	\$0.0489

	Current Avg Cost Utility Service/kWh**	
	Schedule J	Schedule PS
HECO	\$0.1349	\$0.1180
MECO - Maui	\$0.2041	\$0.1775
MECO - Molokai	\$0.2563	\$0.2227
MECO - Lanai	\$0.2740	\$0.2153
HELCO	\$0.2090	\$0.1851

	Total Standby Demand Charges/kWh		Max. Margin/kWh for Costs of Self-Gen	
	Schedule J	Schedule PS	Schedule J	Schedule PS
	\$0.0599	\$0.0419	\$0.0750	\$0.0761
	\$0.0821	\$0.0541	\$0.1220	\$0.1234
	\$0.1332	\$0.0412	\$0.1231	\$0.1815
	\$0.1033	\$0.0859	\$0.1707	\$0.1294
	\$0.1192	\$0.0760	\$0.0898	\$0.1091

	Standby Energy Charges per kWh	
	Schedule J	Schedule PS
HECO	\$0.1000	\$0.0990
MECO - Maui	\$0.0520	\$0.0510
MECO - Molokai	\$0.0640	\$0.0600
MECO - Lanai	\$0.1020	\$0.0970
HELCO	\$0.1800	\$0.1750

	Total Cost per kWh of Standby Service	
	Schedule J	Schedule PS
	\$0.1599	\$0.1409
	\$0.1341	\$0.1051
	\$0.1972	\$0.1012
	\$0.2053	\$0.1829
	\$0.2992	\$0.2510

* Derived from HECO Tariff Filing

** From HECO Website

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ATTACHMENT A2: ESTIMATED COMPARISON

Total Of Reservation+Demand +kWh vs Utility Service J

	Total	Utility Service	Diference
HECO	\$0.16	\$0.1349	\$0.03
MECO - Maui	\$0.13	\$0.2041	-\$0.07
MECO - Molokai	\$0.20	\$0.2563	-\$0.06
MECO - Lanai	\$0.21	\$0.2740	-\$0.07
HELCO	\$0.30	\$0.2090	\$0.09

Total Of Reservation+Demand +kWh vs Utility Service PS

	Total	Utility Service	Diference
HECO	\$0.1409	\$0.1180	\$0.02
MECO - Maui	\$0.1051	\$0.1775	-\$0.07
MECO - Molokai	\$0.1012	\$0.2227	-\$0.12
MECO - Lanai	\$0.1829	\$0.2153	-\$0.03
HELCO	\$0.2510	\$0.1851	\$0.07

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Attachment B
COMMENTS OF USCHPA

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OTHER STATE INITIATIVES

While numerous states recognize the value and benefits of clean DG and CHP, we offer the experiences of two states to provide a context for our comments. California, a pioneer in fostering clean energy, continues its energy leadership with unwavering policies and regulations in support of clean DG/CHP. In 2001, a new law provided a waiver of standby rates (the reservation charge component) for clean DG/CHP under 5 MW (SBX1-28). This waiver is still in effect pending development of long term DG tariffs. Those tariffs are to the extent practicable, to continue the standby charge exemption. The California PUC will soon resume efforts to establish a cost-benefit methodology that will result in tariffs that quantify the benefits of DG. The methodology and resultant tariffs will be a first in the nation. Finally, the recent signing of AB 32, California's Greenhouse Gas Reduction law when implemented, will have CHP front and center in cap and trade mechanisms because on a fuel input basis CHP is the most efficient at producing the lowest greenhouse gases.

Connecticut's 2005 Energy Independence Law is progressive in its encouragement of DG. It also addresses standby rates. Its key provisions are:

- Establishes incentives and a portfolio standard for energy efficiency and CHP
 - Decouples utility revenues from earnings
- CHP incentives
 - \$200 - \$500 per kW, amount linked to congestion avoidance
 - Applicable to customer-side projects up to 65 MW
- Low interest loans
- Gas distribution charges waived
- Backup rates and demand ratchets eliminated under certain circumstances
- Utility to receive \$200/kW incentive for implemented DG
- CHP > 50% overall efficiency also eligible for renewable credit
 - Goal is to reduce energy use, ease grid congestion, decrease air emissions and lessen greenhouse gas emissions
 - 4% reduction by 2010 subject to non compliance penalties

New York State completed a generic consideration of standby rates, applicable to all of the states investor-owned utilities in 2003. The proceeding was public and set out to consider general principles of standby rate design, independent of any specific utility's rate filings, the better to separate the policy goals of rate design from the narrower legalistic constraints inherent in a more piecemeal utility-by-utility, "single-issue" approach. The outcome of that process expressly did not factor in the benefits of CHP, and is therefore inherently biased in favor of utilities at the expense of the public at large. However, the outcomes of this proceeding were noteworthy in the fact they grappled directly with two core

issues common to all standby rates:

1. Actuarial considerations mandate that on-site generation customers must be treated as a class rather than as an individual customer for the purposes of rate design. Thus, the fact that one customer's load is shifted after DG installation is irrelevant unless it can be said that the entire class of DG customers is demonstrably different from other similarly situated customers.
2. Standby rates with demand ratchets misalign utility and customer interests, since a customer has no more incentive to shut their generator down during system peak than during off-peak hours. Thus, a DG customer has no incentive to operate their generator in a manner that would engender T&D deferral benefits.

New York addressed these issues by crafting a standby rate with the following characteristics:

1. The billing demand is indexed not to the DG rated capacity, but rather to the facility peak demand. Thus, a DG customer has an incentive to operate their DG unit in a manner that minimizes facility peak demand.
2. The billing demand is customer-nominated, but includes penalties for going over that demand. This places the obligation for local load management (including, but not limited to DG operation) squarely on the party best able to control, thereby factoring in the actual statistical probabilities of a DG outage during peak periods. This also serves to give the DG owner an incentive to schedule regular DG maintenance in a manner that maximizes grid benefits.

Unfortunately, Florida, from which the proposed tariff has taken its model, is well known as one of the states most hostile to self-generation.

PROHIBITIVE NATURE OF PROPOSED RATES

HECO's attitude about self-generation is clear from its website, where, on a page discussing "Electric industry deregulation¹," HECO takes the classic argument of cost shifting by stating that they will exact "Exit fees to make sure the 'little guys,' primarily residential and small business customers, don't get stuck holding the bag if large customers leave the system by producing their power on site. **Large customers would also pay 'stand by' charges if they leave the system but want to use it for back-up insurance.**" (emphasis added). We show below why the cost shifting argument is flawed. Even moreso, the attitude about self-generation is not conducive for CHP development, and the system benefits that would accrue to HECO and its subsidiaries.

¹<http://www.heco.com/images/pdf/Deregulation.pdf> .

HECO's treatment of DG/CHP is unbalanced. They make no reference on its website to the benefits its ratepayers would obtain from the installation of CHP and DG on its system, including the deferral of transmission and distribution system enhancements, the creation of additional transfer capacity over existing lines, the deferral of new generation capacity investments, and lessening of transmission and distribution line losses – and all as a side benefit of private investment at no cost whatsoever to HECO's ratepayers. Utility commissions and even ratepayer advocates are often fooled into believing that remaining ratepayers suffer if other customers turn to self-generation, ostensibly because remaining system costs must (under traditional cost-of-service ratemaking designed to protect the utility) be re-divided among the remaining customers. However, remaining ratepayers clearly benefit if customers reduce – at their own cost -- their demands on a system that otherwise faces the need for expensive expansion of generation, transmission, or distribution. The utility may not benefit from efficiency or from a delay in increasing its rate base, but the ratepayers do. USCHPA submits that any penalty to ratepayers from other customers self-generating is probably more than offset by such benefits in a utility system facing growing demand and constraints on building new facilities.

A typical DG unit does not exact a burden on the system; rather it reduces both base and peak load demand, effectively reducing the utility's fuel, operation and maintenance costs. An argument that the utility incurs fixed costs and that they need to be repaid is a "blinders-on view." With blinders off, the benefits of DG to the utility system and other ratepayers are undeniable.

The need for such enlightened standby rate treatment is all the more necessary in light of the financial incentive that regulated utilities have to erect punitive, anti-competitive barriers to competitive, load-sited generation. Indeed, we have often found that if the load profiles of customers with CHP are compared to similarly situated customers in the same rate classification without CHP, there is no discernible difference in their load characteristics as a class, and therefore no legal justification for discriminatory rate treatment between those classes.

To the extent such cost analyses have been done in other jurisdictions such as Massachusetts, the results have tended to indicate that there is no meaningful differentiation in load factor between customers in the same class with and without self-generation. While some customers use their self-generation equipment on a baseload constant pattern, imposing their peak demands on the system, many other customers use their self-generation equipment during system peak hours and not otherwise, thereby improving system load factors. Only if the utility could demonstrate that a class of self-generators, as a whole, imposes capacity costs on the system different than those imposed by non-self-generators of the same type would a separate tariff to determine and recover those system costs be justified. No such showing has been made in this instance.

To the extent it makes sense at all to have a standby service tariff especially designed for self-generators, it does not make sense to attribute to that tariff a full share of generation, transmission, and distribution costs as if these self-generators did not generate any of their own power, offsetting their demand on transmission and distribution facilities as well. Yet it appears that HECO has attributed a full share of such costs to this tariff, and merely spread them differently on demand versus energy functions.

HECO's proposal is aimed at preventing all self-generation, and thus takes no account at all of the fact that charging each self-generator its full maximum possible capacity costs in a ratcheted demand charge makes no more sense than for a life insurance company to charge each of its customers the full death benefit every year as a premium. With a number of self-generators on its system, HECO would find that the likelihood of all of them being out of service simultaneously is very small. It would not make sense to design HECO's system to be able to serve all possible load if a significant part of its customers were capable of serving all or part of their own load. For this reason, standby capacity charges should be designed, and adjusted over time, with an eye to the realistic likelihood that self-generation will not be operating, not on the premise that all self-generation would shut off simultaneously at the system peak.

This proposal is also unduly discriminatory. Under this proposal, HECO can elect to suspend this onerous standby tariff with respect to any customer with whom it chose to enter an agreement, merely by recognizing the system benefits that customer's self-generation created. This is unduly discriminatory because similar benefits are likely to flow from self-generators whether or not they are in a contract for those benefits with HECO. Its ability to discriminate under this tariff adds to the leverage HECO seeks to use to prevent self-generation; it can pick its own winners based on non-tariff considerations. (Eg., Terms and Conditions of proposed HECO/HELCO tariffs, section 2.)

HECO proposes that all other elements of the applicable regular rate schedule not specifically established for supplemental service will nonetheless apply, including the Customer Charge, the Power Factor Adjustment, the Supply Voltage Adjustment, the Energy Cost Adjustment, the Commercial and Industrial DSM Adjustment, the Firm Capacity Surcharge and Adjustment, the IRP Cost Recovery Adjustment, the Temporary Rate Adjustment, and the Interim Rate Increase. No case whatsoever has been made by the utility for such a blanket extension of each or all of these add-on charges to self-generators, and several of them appear on their face to have little or no applicability. For example, self-generation is the ultimate form of demand-side management; why should self-generators pay an equal part of the cost the utility incurs to encourage demand-side management. To extend existing customer charges that have no proven applicability to self-generators in the same filing that proposes egregious new ones tailored for self-generators alone adds insult to injury.

Beyond these specific benefits to the utility's other ratepayers, ratepayers also participate along with all members of the general public in the environmental benefits of reduced emissions, the energy market and energy security benefits of enhanced efficiency, and often the benefit of these reliable technologies being employed for critical health and public security facilities. It is Hawaii and its citizens and ratepayers that would be stuck "holding the bag" if CHP and clean DG are suppressed through adoption of egregious tariff proposals making CHP and clean DG economically infeasible. The proposed tariffs would have a devastating effect on the existing 550 MW installed DG base and any future DG project.

The islands offer unique opportunities to allow DG/CHP to flourish and provide benefits to end-users while strengthening the power grid through diversity of resources. At this nascent stage, it is critical that the Commission approve tariffs that foster DG/CHP projects. The guiding principle should be one of customer choice.