

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF HAWAII

In the Matter of the Application of)
)
PUBLIC UTILITIES COMMISSION)
)
Instituting a Proceeding to Investigate)
Distributed Generation in Hawaii)

DOCKET NO. 03-0371

DIVISION OF CONSUMER ADVOCACY'S
POST-HEARING BRIEF

AND

CERTIFICATE OF SERVICE

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I. INTRODUCTION

In accordance with the deadlines established by the Public Utilities Commission ("Commission") in its Prehearing Order No. 20922, filed April 23, 2004, this Post-Hearing Brief ("Brief") is respectfully submitted on behalf of the Division of Consumer Advocacy, ("Consumer Advocate"), Department of Commerce and Consumer Affairs.

This Brief is provided to clarify the Consumer Advocate's position on issues presented in the Commission's Proceeding to Investigate Distributed Generation ("DG") in Hawaii.

In short, the benefit or impact of DG should be evaluated against the lowest, reasonable cost option of each utilities' Integrated Resource Plan ("IRP") that meets the needs of customers in a manner that complies with the State's, energy and environmental policies. This evaluation process may be guided by the Commission's consideration of particular issues and concerns as follows:

1. that specific variables and types of DG should be determined within the Utilities' IRP process;
2. that there is a need to consider a competitive process for installing cost-effective utility DG projects;
3. that it is important to continue developing interconnection requirements and standards for customer-sited DG; and
4. that rules and reporting requirements should ensure that costs of providing utility customer-sited DG are not being subsidized by the Utilities' non-DG customers.

Provided herein, the Consumer Advocate offers a summary of its discussions to be followed with a discussion in response to the Commission's additional issues provided in the Commission's letter dated December 28, 2004.

II. PROCEDURAL HISTORY

The procedural history relevant specifically to the Consumer Advocate is as follows:

On October 21, 2003, the Commission issued its Order No. 20582, opening the instant docket and designating Hawaiian Electric Company, Inc., Maui Electric Company, Ltd., Hawaii Electric Light Company, Inc. (therein collectively referred to as "HECO"), and Kauai Island Utility Cooperative ("KIUC") and the Consumer Advocate as parties.

On March 3, 2004, the Commission issued its Order No. 20832, granting Life of the Land's, Hawaii Renewable Energy Alliance's, Hawaii Energy Services Companies',

the County of Maui's, Hess Microgen's and The Gas Company's motions to intervene. The Commission also granted the County of Kauai and the Department of Business Economic Development and Tourism status to participate without intervention.

On April 23, 2004, the Commission issued its Order No. 20922, approving in part and denying in part the Parties' and Participants' Stipulated Prehearing Order.

On May 7, 2004, the Consumer Advocate filed its Preliminary Statement of Position.

On May 24, 2004, the Consumer Advocate filed its Information Requests ("IR") to all Parties.

On June 9, 2004, the Commission issued its Order 21036, amending its prior Prehearing Order No. 20922.

On June 10, 2004, Johnson Controls, Inc. filed its Notice of Withdrawal.

On June 16, 2004, the Consumer Advocate filed its Responses to IRs from various Parties.

On June 30, 2004, Pacific Machinery filed its Notice of Withdrawal.

On July 14, 2004, the Consumer Advocate filed its Direct Testimony and Exhibits.

On July 15, 2004, the Gas Company filed its Notice of Withdrawal.

On July 28, 2004, the Consumer Advocate filed its IRs to the Parties on their Direct Testimonies and Exhibits.

On July 29, 2004, the Commission issued its Order No. 21187, approving Johnson Controls, Inc.'s, Pacific Machinery's and the Gas Company's Notices of Withdrawal.

On August 2, 2004, the Department of Business Economic Development and Tourism filed its Notice of Withdrawal.

On September 3, 2004, the Consumer Advocate filed its Supplemental IRs ("SIR").

On September 17, 2004, the Commission filed its Notice of Evidentiary Hearing.

On September 17, 2004, the Consumer Advocate filed its Responses to SIRs submitted by various Parties.

On October 22, 2004, the Consumer Advocate filed its Rebuttal Testimony and Exhibits.

On October 28, 2004, the Commission issued its IRs to all Parties.

On November 1, 2004, the Consumer Advocate filed its Rebuttal IRs to the County of Maui on their Written Rebuttal Testimonies and Exhibits.

On November 16, 2004, the Commission notified all Parties of the "Panel Format" hearing process.

On November 22, 2004, the Consumer Advocate filed its Responses to the Commission's IRs.

On November 23, 2004, the Consumer Advocate filed its prehearing conference statement.

On December 1, 2004, the Commission filed its Order No. 21489, describing the panel format.

On December 8 -10, 2004, the panel hearing was held before the Public Utilities Commission.

III. DISCUSSION.

A. PURPOSE OF THE DG DOCKET.

The Consumer Advocate's understanding of the purpose for this docket was guided by the Commission's Order No. 20582. That Order directed that the objective of this proceeding was to "...develop policies and a framework for distributed generation projects deployed in Hawaii...".

Thus, it was the Consumer Advocate's understanding that this docket was structured to be a policy setting proceeding to establish a framework for the potential implementation of DG in Hawaii. Further, that this framework would provide general guidelines and rules to allow for a determination of the key implementation issues on a case by case basis within the utilities' IRP process.

The discussion or determination of specific DG systems or rate designs to deal with DG installations was not contemplated by the Consumer Advocate and there was no opportunity to explore data and information specific to each company or utility to adequately analyze and test the specific rate proposals offered by other Parties. The fact that parties to this docket, at times, referred to specific charges and costs and advocated that specific rates and rate designs be determined in this policy setting proceeding was unanticipated and unsettling.¹

The purpose of this docket should not be to determine the greatest amount of DG nor to encourage vast numbers of DG providers. This docket should develop or clarify

¹ The Consumer Advocate did not address DG proposals set forth by HECO in Commission Docket No. 03-0166 because the Commission declined to consolidate issues from the docket with the instant proceeding and decided instead to suspend the docket. Thus, the Consumer Advocate assumed that the specific proposals regarding HECO's CHP program were left to that docket and were not included for analysis in this policy docket.

the framework to determine the application of applicable DG in a manner that results in enhanced service reliability at the lowest reasonable rates.

B. ISSUES AND AGREEMENTS IDENTIFIED BY THE DG MATRIX.

The Consumer Advocate, in its Exhibit CA-RT-100, filed on October 22, 2004, provided a matrix setting forth the issues and indicating specifically where there were agreements or disagreements between the Consumer Advocate, HECO, HELCO, and MECO (therein collectively referred to as "HECO"), and KIUC.

The matrix sought to provide an expedient and convenient method to compare Parties' positions on the specific issues identified by the Commission. The Consumer Advocate believed that identifying any and all issues that were not contested amongst the Parties would allow for productive discussion and identification of those areas critical for developing general guidelines and policies.

The matrix described twelve main issues with sub-parts. The Consumer Advocate, HECO and KIUC agreed on all issues with the exception of those few issues that either the Consumer Advocate, HECO or KIUC took no position for reasons provided.

Some Parties in this docket appeared to be making specific recommendations for the Commission's consideration, as opposed to focusing on the general guidelines that must be considered to address each issue identified by the Commission. Parties offered specific rates and rate structures in their direct testimonies or in responses to informational requests (see for example Item 10)(B)2. of the DG Matrix), as opposed to focusing the discussion on the objectives of a proper rate design if DG is to be

effectively deployed in Hawaii. There was a proposal to authorize the deployment of a specific type of DG (see for example Item 3)(A)2. of the DG Matrix, HECO's proposed CHP program), although that proposal is the subject of another docket (i.e., Docket No. 03-0166), which the Commission chose not to consolidate into the instant proceeding. Another area, referred to by other parties and clearly not addressed by the Consumer Advocate, was "demand-side management" technologies. It was the Consumer Advocate's understanding that the Commission's Order No. 20582, issued on October 21, 2003, limited this docket to a discussion of distributed generation related to "generating" supply-side resources. Order No. 20582 described "distributed energy resources" ("DER") as including demand-sided management resources and distributed generation but noted that the focus of this docket was specifically "distributed generation."

Therefore, as noted in the DG Matrix, the Consumer Advocate had no position on such specific proposals at this time since such proposals were assumed to be outside the scope of this proceeding and would be addressed on a case-by-case basis in future proceedings.

To the extent that such specificity was provided to illustrate a party's point or position, or for purposes of providing an example as to how a party's position might be implemented, such specific proposals and suggestions have been very helpful. It appears, however, that some Parties proceeded to advocate specific rates and rate designs to be implemented in this policy setting proceeding without other Parties having the opportunity to explore the facts and information necessary to analyze and test such proposals using company specific data. The actual implementation of DG policies

resulting from this proceeding, especially cost allocation and rate design for purposes of developing specific rates, should be addressed in separate proceedings on a case by case basis for each.

C. IRP SHOULD CONSIDER VIABILITY AND FEASIBILITY OF DG APPLICATIONS.

Panel "A" discussions included questions relating to examples of current and potential DG applications, feasibility and viability issues, and types of DG to which the Commission policy should apply.

Viable and feasible will also change over time as developments occur regarding technologies for the supply of energy. Thus, a determination of viable and feasible must be based on criteria that allows for changes in technology over time. While the determination of "viability and feasibility" will direct the course of current and future DG applications, the issue is whether that determination is done through a utility or consumer perspective.²

Determination of a size limitation is relative. The Commission Order provided that the focus of this "investigative docket was a focus on small-scale supply-side resources. The Commission must identify what is meant by small-scale in order to develop the rules and parameters for the deployment of DG in the State. The Consumer Advocate does not, however, support the determination of a specified size limitation. The Consumer Advocate offers that a definition for "size" needs to clarify that size is relative to each of the electric utility systems. The policy that sets the

² Transcript Vol. I, pg. 14, lines 1-7 and pg. 26, lines 1-18. (Joe Herz.)

parameters of DG size should not change over time, but the threshold DG size limitations, in terms of absolute MW amounts, should be allowed to differ and change on each electric utility system over time as changes in each utility's system occur on a case-by-case basis.³

D. WHO SHOULD OWN AND OPERATE DG FACILITIES.

Hawaii's utilities, customers and third-party vendors should be allowed to own and operate DG facilities that are located on customer premises. The Consumer Advocate concurs with the utilities' concerns with the adverse impacts of the loss of revenue from customer-sited DG. These concerns are valid and should be addressed in a rate case proceeding or through the IRP process.

The perceived impact of DG differed among the Parties. The Utilities are concerned that the installation of Non-Utility owned customer-sited DG will result in a loss of revenue designated to cover the Utilities' fixed operation and maintenance expenses. The Utilities are also concerned that because Non-Utility DG participants would not be subject to regulatory oversight regarding their operation and maintenance of DG facilities, the Utilities' system reliability and system costs could be adversely impacted when compared to customer-sited DG that is directly owned and controlled by the Utilities.

Customers of an investor-owned utility approach and consider the economics and impact of installing DG from a different perspective than would the owners of the Utility. In the case of KIUC, the owner and customer are one in the same and the

³ Transcript: pg. 32, lines 2-22; pg. 51, lines 3-13. (Joe Herz.)

decisions regarding DG should therefore be joint decisions between KIUC and its owners/customers. As noted in the DG Matrix at Item (12)(C)3., “[t]he process of demonstrating rate payer benefits should be standardized for each utility, taking into consideration, among other things, the ownership structure of the utility (cooperative vs. investor-owned).” (Emphasis added.) Therefore, the ability of KIUC to have the right of first refusal for ownership of customer-sited DG makes sense for KIUC and is acceptable to the Consumer Advocate.

The Non-Utility Parties were concerned with the Commission’s ability to create a “level playing field” to adequately protect the Non-Utility DG participants from utility actions would discourage DG participation by others. They fear that Hawaii’s utilities have a tremendous competitive advantage that could adversely affect the effective deployment of DG in Hawaii.

The Consumer Advocate acknowledges third-party vendors’ concerns for a “level-playing field” but is convinced that such a “level playing field” could exist even if utilities are allowed to own, operate and maintain customer-sited DG because any information about customer loads and the potential customer-sited DG locations may be obtained by third-party vendors directly from customers in order to assess whether such customers can benefit from the installation of DG at the customer’s site. The IRP process is also another valuable source of information regarding possible customer-sited DG. Thus, the utility does not hold a competitive advantage in this regard.

In addition, the electric utilities have access to the same equipment vendors as third parties and customers. Thus, it would appear that no specific entity or individual would have a technological advantage with regard to DG equipment.

The Consumer Advocate supports offering of utility customer-sited DG as a regulated service. The Consumer Advocate does not recommend that such service offering be provided as an unregulated service, either by the utility or through a separate subsidiary because the utilities' involvement in the customer-sited DG market would focus on reliability in a manner consistent with central utility planning (i.e., the IRP process). This would contrast with an unregulated subsidiary's focus, which may be on cost and profit for specific customer-sited DG projects. If offered as an unregulated utility service, there would be no requirement to seek Commission approval for the installation of the DG unit at a customer's premise, or for the rates to be charged for the energy provided by DG facility, similar to the existing arrangement between customers and third-party vendors of DG facilities.

Although some Parties assume that the creation of a separate non-regulated subsidiary to provide utility owned and operated customer-sited DG will ensure the creation of a level playing field, their expectations will not be met if the utility provides the DG service with resources used to provide the existing regulated electric service and the proposed customer-sited DG service. In such a situation, the concerns with the potential for cross-subsidization and the need to create a "level playing field" continue to exist.

Current examples of a utility providing service to a non-regulated entity using utility resources or when a utility receives service from a non-regulated entity are the

Gas Company using the same resources to provide the regulated gas and non-regulated bottled gas service, the local incumbent telephone company uses the same resources to provide regulated and non-regulated services, and similarly, HECO using the same resources to provide service to both the utility and Non-Utility operations of its parent, HEI. In all of the above situations, there are rules and reporting requirements that assist the regulatory agencies (i.e., the Commission and the Consumer Advocate) in determining whether cross-subsidization of the non-regulated operations by the regulated operations is occurring.

The Commission should allow utility participation in the customer-sited DG market but their participation, however, should be limited to those DG projects determined to be implemented from the Utilities' IRP plan and the participation should be in a manner that is not unduly or unreasonably preferential, discriminatory or anti-competitive as noted in Item (2)(B)1. of the DG Matrix.

Preventing participation by the utilities in the customer-sited DG market will reduce the number of potential DG suppliers and impair the creation of a competitive DG market. In addition, not allowing the utilities to participate in the customer-sited DG market may adversely impact the utilities' ability to provide reliable service at the lowest reasonable cost.

Also, if the installation of customer-sited DG were offered as a utility service, the Commission would have an opportunity to review the proposal and determine if such installation is a cost-effective means of meeting the utilities' customers' energy needs. This installation would first be identified in the development of the Utilities' IRP. The Commission could also require the Utility to seek Commission approval of a specific

project through the filing of an application. Both processes will provide interested parties an opportunity to address concerns with the specific proposals of the utility.

E. MAUI COUNTY'S MARKET POWER ANALYSIS IS INACCURATE.

The Consumer Advocate disagrees with particular comments by Jim Lazar on the subject area market power and comments regarding an energy pricing structure (as opposed to demand and energy charge pricing structure) on the mainland.

Jim Lazar's rebuttal testimony included a market power calculation using the Herfindahl-Hirschman Index ("HHI"). The HHI was used for a brief period by the Federal Energy Regulatory Commission ("FERC") as part of its restructuring the mainland generation market. FERC's restructuring of the wholesale market on the mainland involved moving from cost-based rates to open access transmission service and market-based rates (i.e., allowing utilities to charge capacity and energy prices that the market would bear). FERC's considerations of market power were included as part of its restructuring and movement to market-based pricing.

The reason that a market power analysis is inappropriate, however, for HECO's proposed DG participation as a regulated service is as follows.

The FERC market power considerations were not directed at, or driven by, concerns relating to the utilities' regulated services provided at cost-based wholesale rates. Rather, the market power considerations by FERC were in connection with a utility being granted the ability to charge market based rates as part of FERC's restructuring the industry; that included open access transmission service and competition at the wholesale level and eliminating cost-based wholesale power

rate-making. Therefore, if one were to draw an analogy or attempt to use FERC's market power analysis in this proceeding, it would be applicable only if the utility proposed to participate in the DG market as an unregulated service provider.

The position taken by the non-utility participants is that if utilities are allowed to participate in a DG market, they should offer DG only as an unregulated activity. Unregulated activity is what caused FERC to evaluate its market power concerns with the mainland utilities to determine whether the utilities should be provided the opportunity to charge market-based rates. In other words, the market power considerations have no bearing with FERC in connection with utilities providing regulated cost-based services as claimed by Jim Lazar. In fact, the market power considerations would only come into play if the Commission were to allow the utilities to participate as an unregulated entity as suggested by Jim Lazar.⁴

In addition, Mr. Lazar's representation that the mainland is moving towards energy based pricing (implying that a demand and energy pricing structure is no longer being utilized), is erroneous and his statement that the Dow Jones reporting energy rates as support of such a claim is misleading.

On the mainland, the pricing structure is still demand and energy where firm electric service is required in long term agreements comparable to all-requirements system power. Most "energy only" transactions are short term in nature (hourly, daily, weekly, monthly). In fact, the PJM, an organization responsible for the operation and control of the bulk electric power system throughout major portions of five mid-Atlantic states and the District of Columbia, Regional Transmission Organization (RTO)

⁴ The Consumer Advocate does not support the utility participating only as a unregulated entity.

operates both capacity and energy markets. PJM requires capacity as an integral part of operating the RTO and charges a demand charge, not an energy charge.

Secondly, with respect to the reported Dow Jones energy prices there is some clarification required as to what is being reported. The prices reported are reported in a dollar per megawatt hour basis, for 50-megawatt blocks of power for on-peak and off-peak periods. The on-peak period is a 16-hour period from 7 AM to 11 PM, six days a week (excludes Sunday and holidays). In other words, if one is to contract and purchase on-peak power, one must take the amount purchased for a 16-hour period each day of the contract period and one cannot vary the amount purchased from one hour to the next to follow changes in load during that period. Therefore, it is a fixed quantity of energy that must be purchased each hour for the 16- hour period. The must-take nature of this product is a demand charge in disguise. These prices are also reported at various "hubs" across the mainland consisting of COB (California-Oregon border), Palo Verde (located near Phoenix Arizona), Cinergy (in Ohio) and PIM (in Ohio and Pennsylvania).

The distinguishing factor is that there is no hub for Hawaii and the Consumer Advocate is not aware of any plans that there ever will be a hub for Hawaii. That is because the hubs are points on the Mainland's interconnected system where power can be exchanged between numerous utilities located throughout a region of states as utilities have available excess power or are in need of additional power or an economic transaction.

There is no interconnection between Hawaii's electric systems and other systems, nor is there the ability to transact power between utilities thus prohibiting the

utility from entering into economic transactions with other utilities within the state. Therefore, there is absolutely no relationship or significance to the hub pricing that may take place on the mainland with this Commission's consideration of DG and standby charges and rate structures in this proceeding, notwithstanding the possibility that MECO may argue that their recommendation are for retail wheeling of power. In fact, if anything, it highlights the differences between Hawaii's isolated utility systems and the interconnected utilities on the mainland.

In order to mitigate any assumed market power as a regulated entity, utilities should not be allowed to provide discount or rebate purchase incentives without prior Commission approval of such discounts. In contrast, unregulated third-party vendors would not need to obtain Commission approval to offer such discount or rebate incentives to potential DG customers, thus, giving these vendors flexibility to competitively price their products.

Not allowing the utility to participate in the customer-sited DG market, however, may adversely impact the utilities' ability to provide reliable service at the lowest reasonable cost. Any significant loss of load or additional equipment needed to ensure service reliability may result in higher prices for non-DG customers.

F. UTILIZING AND IMPLEMENTING THE IRP PROCESS.

The Consumer Advocate is not suggesting that any revision to the IRP Framework is required, however, the IRP process as set forth in the Framework is the proper forum for the purpose of analyzing and determining utility and customer DG

perspectives, to the extent possible since not all customer-sited DG can be done through the utility's IRP.

The IRP process should guide DG development to implement the utilities lowest reasonable cost IRP plan and if DG incentives are intended, the IRP process must consider Incentives solely for the promotion of DG, without regard as to whether the installation of the DG is consistent with the utility's IRP.

The types of DG that should be included in the IRP five-year action plan should be those that are commercially viable at the time that the plan is developed, and considered to be suitable for use in Hawaii. Thus, utilities should include information in their IRPs that identify cost-effective locations for DG projects on the electric system.

It is important to note that the IRP process must be on-going to be utilized as an effective planning tool. Evaluations of Commission approved plans must occur simultaneously with the development of the next IRP. Thus, new technologies that become commercially viable after the current plan is developed can be incorporated in the development of the next IRP so as not to interrupt the implementation of the five-year action plan in the Commission approved IRP.

In this regard, the Commission approved five-year action plan should not be modified to the extent practical. The timing of events set forth in the plan, however, may be subject to change depending on how well the actual sales and load match the forecasted levels upon which the plan was developed.

In addition, while developing the IRP plan, each utility must set forth the quantified goals and objectives that are intended to be achieved with the action plan, the measures by which one will be able to assess the achievement of each goal and

objective, and the time line for achieving these goals and objectives. This must be done at the inception of the planning process to allow for an effective assessment of the alternatives under consideration in developing the five-year action plan.

Within in the current IRP framework, it is provided that all externality costs and benefits must be considered. The Consumer Advocate offers that the Commission's role is to ensure that the utility's IRP process is being utilized properly and to the fullest extent possible to develop the lowest, reasonable cost plan, and that the IRP process includes consideration of externalities.

G. RELATED ISSUES SUMMARY.

The Commission, in determining the issues related to supporting DG potential in Hawaii, must consider the following tasks:

1. the deployment of customer-sited DG, to the extent possible, in the development of each utility's IRP action plan by evaluating the cost-effectiveness of DG resources through the identification of specific areas or types of areas where DG is needed or could be most beneficial;
2. a competitive procurement process for the implementation of each utility-owned DG;
3. require each utility to have Commission approved interconnection standards and agreements to qualify or approve DG facilities for interconnection with the utilities' grid; subject to ongoing review and amendments as industry standards change;
4. develop and have cost of service information and apply appropriate tariffs

- that result in a DG customer being served at a cost that is not subsidized by non-DG customers; and
5. develop rules and reporting requirements to prevent cross-subsidization of utility-owned customer-sited DG by non-DG utility customers, to the extent practical.

IV. RESPONSES TO COMMISSION'S DECEMBER 28, 2004 INQUIRY.

Provided below are the specific responses to the Commission's letter, dated December 28, 2004. For convenience, the responses are provided in "Response to Information Request" format.

1. Whether costs and benefits of distributed generation change in times of excess capacity vs. times of shortages of capacity; if the answer is yes, then given that for the life of any long-term asset there are likely to be periods of excess capacity and shortages, please comment on the time span over which one should measure the costs and benefits of distributed generation.
- R1. Yes, the costs or benefits of DG, or any supply side resource for that matter at any particular moment in time will change significantly depending upon the need for, and operational features (i.e., firm versus as available) of, such DG resources to serve loads at that particular time. The true span over which one should measure the cost and benefits of DG should be the twenty-year IRP plan the same as that for any other long term supply side resources. Of course any consideration of cost and benefits of supply side resources should take into account externalities. See also response to 2. below.

2. How should non-utility owned distributed generation be incorporated into the IRP process, in a manner comparable to the treatment of utility-owned distributed generation, so that there is no market or regulatory advantage of one type over another?
- R2. With respect to the IRP process, there are three aspects that should be incorporated so as to minimize any market or regulatory advantages. First, non-utility DG should be incorporated in the aggregate in the IRP process, the same manner that utility owned DG should be recognized in the IRP process. Because DG involves the use of "small scale" electric generating facilities located at or near a load, individual non-utility DG projects, as well as utility DG projects, evaluated on a stand alone basis would not likely show a significant or meaningful impact on the IRP plan. Yet in the aggregate such non-utility DG projects and utility DG projects can have a significant, and beneficial impact in determining the lowest reasonable cost plan to provide reliable service in the IRP process. In order to complete a fair evaluation, an aggregate forecast of non-utility and utility annual DG resources must be considered (see CA-RT-100, item 110). Second, the IRP plans will need to consider the impact of different types of DG projects, and the operation of such DG projects, (i.e., whether the project provides energy only, capacity and energy, but also ancillary functions required to operate the electric utility companies' systems). Failure to recognize these differences will adversely affect the IRP assessment of the actions required to provide service at the lowest reasonable cost to DG and non-DG customers. Third, the IRP plan will need to identify congested load pockets on the electric utility companies' delivery system to properly recognize the potential technical and economic impacts of DG projects. These three features assure the cost

effective evaluation and identify the specific areas or types of areas where DG is needed or could be most beneficial, without providing market or regulatory advantage of one party over the other; and, does not compromise the development of the lowest, reasonable cost IRP plans.

Ultimately, however, it will depend more on the rates than the treatment of non-utility DG in the IRP process whether one party has a market or regulatory advantage of the other. To the extent that a customer or third party decides to install DG to serve all or a portion of that customer's energy needs, the evaluation of the costs and benefits of the specific installation, both direct and external, would be outside the Commission's regulatory oversight since the customer or third party provider is not subject to Commission oversight. The Commission's input in this situation will be the rates and price signals that are established for the utility who may be required to provide supplemental service to the customer or third-party vendor, which will likely be the primary driving factor in the non-utility DG decision-making process. If the utility charge for DG providers are set too high so as to discourage non-utility DG, then the utility will have a market or regulatory advantage. If such rates are set too low, non-utility DG owners will have the advantage; in which case the non-DG rate payers will in all likelihood bear such higher cost and therefore will not be served at the lowest reasonable costs because of the subsidy to non-utility DG owners.

Accordingly, it is crucial for the public interest that the IRP process includes the above features and that rates are properly set to minimize market or regulatory advantages between utility and non-utility DG owners. Using as an

example what has been implemented by utilities in other jurisdictions (see for example, Northern States Power Company Distributed Generation Standard Interconnection and Power Purchase Tariff approved by the Minnesota Public Service Commission), a customer with non-utility DG has its entire energy usage billed at the utility's standard applicable tariff, but receives a credit for the DG output computed at the utility's avoided cost (which should be determined from the utility's IRP plan). The DG avoided cost credit would vary according to the capabilities of the non-utility DG by taking into account the energy, capacity (if any) and ancillary services (if any) for the type of non-utility DG and the avoided T&D costs, if any. This approach avoids potential loss of revenue issues related to intra and inter rate class subsidies because the customer's entire load is billed at the standard applicable tariff.

3. Whether transmission and distribution costs will be substantially reduced for CHP or other distributed generation projects set up for peak shaving only.
- R3. On some systems, such as KIUC, it is not anticipated that transmission and distribution costs will be substantially reduced by DG. On the other hand, there are locations on other systems where load pockets exist that could benefit substantially from DG if significant quantities of DG could be timely added to alleviate transmission and distribution delivery system congestion. The specific areas or types of areas where such DG is needed or could be most beneficial should be identified to the extent practical and encouraged for DG deployment. For example, some utilities provide a DG customer with a distribution facility credit for DG facilities that locates in such an area and is capable of being

dispatched by the utility. Because this situation is of a site specific nature, the credit is often times determined from a DG interconnection application case specific study of avoided distribution cost. The avoided distribution cost are based on the utility's distribution planning study that identifies capacity needs, upgrade and load growth on various distribution facilities. As part of the specific study, the utility performs an initial screen at the time of interconnection application of the DG project to determine if the project is located in an area that has potential for a distribution facility credit.

4. Whether potential loss of revenues to investor owned utilities, due to advancements in technology and the development of new markets is a risk for which the utility has been and is compensated through its approved rate of return; and which forms of distributed generation, if any, would fall into the category of advancement risks for which the utility already receives compensation.
- R4. The Consumer Advocate is without sufficient facts to discuss which specific forms of DG would fall into the category of advancement risks for which utilities already receive compensation.

As a general statement, yes, the risk of a potential loss of revenues to investor-owned utilities due to advancements in DG technology and the development of new DG markets is a risk for which the utility receives recognition and compensation through its approved rate of return. That is because the determination of an appropriate rate of return for an investor-owned utility should take into account, among other factors, the DG technology currently available, the potential size of the DG market, and the at risk loss of revenues related thereto. The potential loss of revenues due to non-utility DG should be taken into

account by investors in the utility and by the Commission when setting an appropriate rate of return for the utility.

On the other hand, there is a potential loss of revenue risk to utilities that is not related to advancements in DG technology and the development of new DG markets, but is related to the shortcomings of the utility's current rate structure to effectively deal with DG customers. These "rate structure" risks involve the potential loss of revenues to the utility because the utility's current rate structures were designed for customers taking all of their electric service requirements from the utility, and that there are due to the inter and intra rate class subsidies inherent in the utility's current rates and rate structure. These inter and intra subsidies not only create a potential loss of revenues to the utilities, which ultimately would be borne by the non-DG ratepayers, but also may result in the customer installation of DG technology and new DG markets that would not be consistent with the utility's lowest reasonable cost IRP plan.

5. Whether the utility would have stranded costs in the period of load growth.
- R5. While the answer to this question is dependent upon the specific facts of the circumstances, in general, one would not expect that over time a utility would have stranded costs in a period of rapid load growth because the "stranded" facilities would be absorbed by the utility's new load. However, if a customer installs DG facilities but plans to remain connected to the electric system for servicing its electric needs not provided by DG, the current rate structure would result in a loss of sales and the utility may not be receiving revenue to cover all of

the cost of the services provided by the utility system. Depending on the magnitude of the revenue loss, the utility may eventually, require the non-DG customers to make up the revenue shortfall.

For example, the customer will still utilize the utility's transmission and distribution system and generating services when the customer's DG is not operating, or not serving all of the customer's load. Also, some of the utility's generating reserve margin will likely be utilized to pick up, or absorb, moment-to-moment fluctuations in the customer's load and to maintain a proper voltage level at the customer's point of connection to the utility grid. The utility's reserve margins will also be utilized to pick up the customer's load when the customer's DG supply is interrupted either on schedule or unexpectedly. The concern over "stranded costs" even in a period of load growth, is one of whether the rates will allow the utility to continue to receive revenues for the services provided to the DG customer. Currently, the electric utility companies' electric rates are based on the utility metering all of the customers' energy usage. The rates were not designed to recover revenues for fixed costs currently incurred if energy sales are decreased by non-utility owned DG because of significant portion of the utility's fixed cost recovery is built into its energy rates. If non-utility DG is installed "behind the meter" and, thus, decreases the metered energy (kWh), the utility's revenues to cover fixed costs would be less than it planned to receive when it designed its rates. This decreased revenue could be a "stranded cost" problem depending on the magnitude of revenues lost from the installation of the DG facility in relations to the level of fixed costs intended to be recovered from

the lost revenue. The decreased revenue may eventually cause the electric utility to increase the rates charged to non-DG customers to replace the revenue shortfall.

6. Is it reasonable to expect identification of individual projects or project zones in the IRP process? What specific modifications to the IRP process should the Commission consider to facilitate such identification?
- R6. While it will not likely be reasonable to expect identification of all individual projects or perhaps accurately identify project zones in the IRP process, the IRP process should include a reasonable expectation as to the aggregate forecasts of DG resources in order to develop the lowest reasonable cost plan for providing reliable service and in order to complete a fair evaluation of the benefits and impact of DG (see CA-RT-100, item number 11). No changes to the IRP framework are required for consideration of DG (see CA-RT-100, item number 11); the utilities, however, should plan for and facilitate deployment of DG through the IRP process by evaluating the cost effectiveness of DG resources for inclusion in the utility's resource plan and identify specific areas or types of areas where DG is needed or could be most beneficial to the extent practical (see CA-RT-100, item number 3).
7. Under each of the two scenarios for participation in distributed generation – utility participation and utility affiliate participation – what rules and restrictions are necessary to assure that the competition between non-utility projects and utility-owned (or affiliate-owned) projects is evenhanded, meaning that the utility or utility affiliate has no unearned competitive advantage? (Note: although some Parties and Participants may believe that there is no possibility of unearned competitive advantage, while other Parties and Participants might believe that any participation by the utility or an affiliate will distort the market, the

Commission urges Parties and Participants to suspend these beliefs for purposes of this question and assist the Commission's consideration of practical approaches.)

- R7. The Commission should develop rules and reporting requirements to prevent cross-subsidization of DG, whether utility-owned or non-utility affiliates as long as utility resources are used to support the affiliate for non-regulated operations. This is similar to the Gas Company, where both utility and non-utility gas services are provided by the utility. The Commission's policies from this proceeding should set forth a framework that includes a requirement for utilities that intend to provide customer-sited DG services to establish accounting mechanisms that will properly identify the costs and revenues of providing DG services. This would entail the establishment of separate activity codes to account for the Utility's cost of installing customer-sited DG projects and the operating costs and revenues associated with such installations. In addition, internal company cost allocation procedures should be established to allow for an independent review of the allocation of common costs to DG projects in order to ensure that cross-subsidization of the DG service is not occurring. These cost allocation manuals should be subject to the review by the Consumer Advocate and the Commission with the Commission having the final approval authority. Also, the financial records should be available for review and subject to verification by the Commission, Consumer Advocate and other appropriate parties so as to ensure that revenue from electric customers does not subsidize the DG services.

Finally, the Commission should require utilities to treat customers with utility-owned DG the same as customers with non-utility owned DG in terms of rates, charges and utility services.

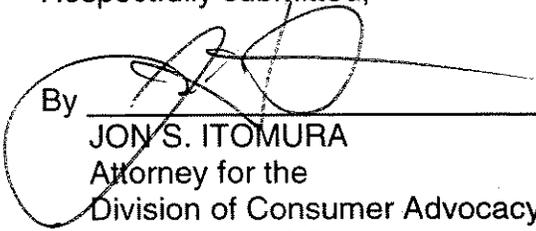
The intent of this approach is several-fold. First, if utilities sell DG projects to customers, the employees and equipment, overheads and facilities should not be funded from non-DG electric rates. These expenditures should be borne by the DG operations. This would ensure that non-DG customers do not pay for utility-owned DG facilities and that rates will continue to be applied fairly and equitably. In addition, if the utility DG operations is in any way subsidized by the non-DG electric utility operations through discounts or employees who perform the DG installation and maintenance but are paid by the utility without the appropriate cost allocation, the DG operations would theoretically be able to install DG projects at a lower cost than other third-party vendors. The utility's DG operations and the costs associated with the installation and maintenance of the DG system should be subject to the approval of the Commission to ensure that revenue from non-DG electric customers does not subsidize utility-owned DG customers.

Finally, the Commission should require utilities offering DG as a regulated service to submit, for Commission review and approval, applications to install customer-sited DG. This requirement will provide an opportunity for interested parties to express their specific concerns with the utilities' application to the Commission.

It is the Consumer Advocate's position that utilities should be permitted to participate in customer-sited DG projects, preferably as a regulated service, provided that such participation is in a manner that is not unduly nor unreasonably preferential, discriminatory or anti-competitive. Thus, if the Commission concurs that the utilities should be allowed to own customer-sited DG, the Commission will need to provide specific guidance to ensure that a "level playing field" exists for all DG providers, consistent with the Consumer Advocate's recommendations set forth above.

DATED: Honolulu, Hawaii, March 7, 2005.

Respectfully submitted,

By 

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CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing **DIVISION OF CONSUMER ADVOCACY'S POST-HEARING BRIEF** was duly served upon the following parties, by personal service, hand delivery, and/or U.S. mail, postage prepaid, and properly addressed pursuant to HAR § 6-61-21(d).

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