

TGC/HECO-SOP-IR-1

- a. Please identify the consultant(s) and/or consulting firm(s) HECO, HELCO, and MECO expect to use to supply or assist in the formation of testimony, statements of position, exhibits, etc. in this proceeding.
- b. Please provide copies of any testimony, comments, position statements, articles, memoranda or other written documents, slides, etc., prepared in part or wholly by such witnesses, consultant(s) or consulting firms since enactment of PURPA in November 1978 which address the topics of (1) market power or market concentration in gas or electric wholesale or retail markets, (2) affiliate rules, standards and/or codes of conduct, (3) distributed generation or cogeneration, (4) divestiture or other structural or functional separation of the generation function by vertically integrated electric utilities, (5) unbundling of electric utility rates or services, (6) cost allocation, rate design, incentive or performance-based rates for electric or gas utilities at the state or federal level, (7) any facet of integrated resource planning, (8) back-up/standby rates or rate design and scheduled maintenance rates, (9) bypass or “uneconomic bypass,” or customer retention-type rates, and (10) competitive bidding for generation.

HECO Response:

- a. TGC will have the opportunity to submit information requests with respect to the Companies’ written testimonies after the testimonies are submitted in accordance with the schedule of proceedings. The Companies also object on the grounds that any consultants obtained by counsel would be subject to the attorney work product privilege except to the extent that they submit testimonies in this proceeding. Without waiving their objections to this information request, the Companies state that they have not retained any consultants for this proceeding at this time.
- b. Not applicable.

TGC/HECO-SOP-IR-2

Ref: HECO Preliminary Statement of Position

Please provide an electronic version of HECO, MECO, and HELCO's current tariff rules and schedules for purposes of facilitating responses to the Commission's issue 13, regarding changes needed to utility rules and practices to facilitate the successful deployment of DG.

HECO Response:

The Companies object to this information request as being overly broad. Without waiving the objection, one copy of a compact disc with HECO, HELCO and MECO's current tariff rules and schedules will be provided to TGC (and to the Commission and the parties/participants to this proceeding) under a separate transmittal, and the Companies will expect TGC to provide an electronic version of its current tariff rules and schedules in response to the Companies' next set of information requests.

TGC/HECO-SOP-IR-3

Ref: HECO Preliminary Statement of Position

Please list every reason or consideration that has entered into the tentative decision of HECO/MECO/HELCO not to participate in the Hawaii market for DG if required to do so only through a separately capitalized, separately staffed affiliate.

HECO Response:

At this time, the Companies do not anticipate participating in the DG market if only a separately capitalized, separately staffed affiliate was allowed to participate. The Companies' reasons for providing CHP system services as a regulated utility service are stated in the CHP Program application. The expertise and resources to provide such services reside in the utility. The customers desiring such services are utility customers. The objectives of the program are utility objectives. The needs of participating and non-participating customers can be served if the program is provided on a regulated basis, while the impact on non-participating customers would be a non-factor for an unregulated supplier of CHP systems. Utilities are in a better position to provide customers with the option of having the services provider be the entity that owns, operates and maintains CHP systems, which should increase the market for such systems.

The Companies might consider providing CHP systems services on an unregulated basis, if that was the only option, through the utilities themselves, in the manner that TGC provides both unregulated propane services and regulated SNG and propane services within the same entity. However, this would present opportunities for conflicting objections between the regulated and unregulated businesses of the Companies, which would not be present if the Companies provided CHP systems services on a regulated basis.

TGC/HECO-SOP-IR-4

Ref: HECO Preliminary Statement of Position

Please provide copies of all documents, studies, etc. analyzing HECO, MECO and/or HELCO's penetration of the market for electric generation on Oahu, Maui and Hawaii, on all islands where they do business, or broken down by county, or collectively.

HECO Response:

HECO has not conducted an analysis of electrical generation market penetration, other than the hypothetical central station generation analyses done in Docket No. 96-0493. It is not clear what the relevance of such an analysis would be with respect to the market for customer-sited DG, where the Companies currently have a 0% share of the market. HECO has forecasted the CHP market potential. See the CHP Program application, Exhibit A, Docket No. 03-0366, for the forecasted CHP market for HECO, HELCO and MECO, with participation on a regulated basis, and without utility participation, in the CHP market. The CHP Technical Committee in the HECO IRP-3 process, Docket No. 03-0253, is currently updating the HECO CHP market forecast.

TGC/HECO-SOP-IR-5

Ref: HECO Preliminary Statement of Position, p.1 “In order for a form of DG to be “feasible and viable for Hawaii”, it must be (1) technically feasible, (2) commercially available, (3) economically viable (i.e., cost-effective versus other options), (4) price competitive in the short-term, (5) sustainable in the long-term (i.e., backed up by adequate infrastructure support with respect to O&M and fuel), (6) able to address site-specific constraints (e.g, with respect to permitting) and (7) able to meet the perceived needs of customers.

- a. In the context of the proceeding statement, please define the terms “technically feasible” and “commercially available”.
- b. Please explain how a project would be defined as “economically viable.” Can more than one option be considered “economically viable?” Please explain why or why not.
- c. Please explain what is meant by “price competitive” and define “short-term” and “long-term.”

HECO Response:

- a. The Companies consider a form of DG to be “technically feasible” when that technology has been built, tested, and considered as a proven technology by industry peers.

The Companies consider a form of DG to be “commercially available” when DG equipment of that technology is listed in a reputable manufacturing company catalog with the ability to order multiple units of that equipment along with O&M procedures and product warranties. Prototype equipment would not be considered to be commercially available.

- b. The Companies consider a form of DG to be economically viable when its life cycle cost is lower or relatively low when economically compared with other options.

More than one option can be considered as being “economically viable.” For example, a customer may choose a second feeder from the utility grid for power reliability or a DG/CHP system with on-site power for a dedicated load in the event of a grid outage. Both

customer options can be considered as economically viable while offering different solutions to a customer's goal of power reliability.

- c. The Companies consider a form of DG to "price competitive" when costs are comparable to other forms of DG offering the same or similar operational, life cycle cost and capacity features.

"Short-term" would be in the one to seven year time horizon. The evaluation of a short-term period would depend on the circumstances and application of that analysis.

"Long-term" would be in the ten-year and greater time horizon. The evaluation of a long-term period would depend on the circumstances and application of that analysis.

TGC/HECO-SOP-IR-6

Ref: HECO Preliminary Statement of Position, pp.1-2 “As indicated by current utility and customer applications, DG uses in Hawaii have included...(4) commercial customer-sited generation for combined heat and power (‘CHP’) systems...only.”

Please identify any and all commercial customer-sited generation for combined heat and power systems that are owned by the Utility or included in its rate base.

HECO Response:

The Companies are not aware of any at this time. However, the Companies are aware of one municipal utility, City of Austin, Texas, that offers CHP/DG.

TGC/HECO-SOP-IR-7

Ref: HECO Preliminary Statement of Position, Issue 2, p. 7, types of DG

- a. Is HECO aware of any commercial and/or industrial user-sited, types 4 and 5 CHP units owned by a vertically integrated, shareholder-owned, electric utility (not including any electric utility affiliate) in the U.S.? To the extent known, please state whether such CHP is sized so as to deliver electricity to the grid. To the extent known, state the jurisdictions, what percentage of user-sited CHP in the U.S. is owned by a vertically integrated, shareholder-owned, electric utility in whole or in part.
- b. Is HECO aware of any commercial and/or industrial user-sited, types 4 and 5 CHP units owned by an electric utility affiliate in the U.S.? To the extent known, please state whether such CHP is sized so as to deliver electricity to the grid. To the extent known, state the jurisdictions, what percentage of user-sited CHP in the U.S. is owned in whole or in part by an electric utility affiliate.

HECO Response:

- a. See response to TGC/HECO-SOP-IR-6.
- b. Yes, some of the installations are large enough to export power to the grid. The Companies have not conducted any formal studies on this matter.

TGC/HECO-SOP-IR-8

Ref: HECO Preliminary Statement of Position, pp. 9, 27 concerning benefits of utility ownership of CHP as listed in Docket No. 03-0366, and technical and economic feasibility of 77 MW of CHP to be installed over the next 20 years.

- a. Please provide an electronic copy of the workpapers and exhibits to the application in Docket No. 03-0366, with formulas intact, for purposes of verifying the support for claimed benefits, technical and economic feasibility, etc. in connection with that application.
- b. Please provide copies of any customer impact studies that demonstrate the effect of that 77 MW of CHP or any portion thereof, if performed by third parties rather than the utility.
- c. Please provide copies of any studies done on the ability of the electric utilities to “make back” any portion of the potential load loss by converting gas, diesel, naphtha, solar, or other alternative load of the customers to electricity and/or diesel-fired CHP.
- d. Please identify any of the customers represented by that 77 MW of CHP who have existing gas load.

HECO Response:

- a. One copy of a compact disc (“CD”) with the spreadsheet files for Exhibit H and the workpapers for Exhibit H will be provided to the Commission and parties/participants to this proceeding under a separate transmittal. (The exhibits other than Exhibit H are text files or simple compilations that do not involve extensive calculations subject to verification.)
- b. For this application in Docket No. 03-0366, the Companies analyzed the difference between scenarios in which only third-parties install CHP systems and in which both the utilities and third-parties install CHP systems. The Companies did not analyze the difference between scenarios in which no CHP systems were installed, and in which CHP systems were installed by third-parties, since it did not deem the scenario in which no CHP systems were installed to be a realistic scenario.
- c. No such studies have been done.
- d. The 77 MW was determined on a generic basis – not by specific customer. Most customers

who are candidates for CHP use some fuel and/or a heat pump for heating water. As described in response to TGC/HECO-SOP-IR-15, subpart b., there may nor may not be displacement of gas load by the generic 77 MW.

TGC/HECO-SOP-IR-9

Ref: HECO Preliminary Statement of Position, p 9 “The provision of CHP services by utilities is a natural step in the evolution of electric utility services, and electric utility customers...utilities.”

Do the Utilities envision installing, owning and operating other HVAC equipment (i.e, chillers, boilers, venting, etc...) as part of the “evolution?”

HECO Response:

Improvements in automated control technologies, communications systems, and the capabilities of Internet based monitoring and control are a combination of recent developments which allow electric utilities to consider smaller DG installations as viable electric system resources. The high cost of remote terminal units (RTUs) and dedicated phone lines for monitoring and other phone lines for controls are examples of costly infrastructure which would be economical only with larger sized DG installations. The same monitoring and control is now accomplished with a single phone line with secure multiple monitoring and user capabilities using the Internet.

This evolution of technology now allows smaller DG/CHP projects to be cost-effective while maintaining the degree of control and monitoring required by the utility system operator.

Many CHP Systems would include one or more absorption chillers, one or more cooling towers and related auxiliaries along with providing waste heat to the customer’s hot water heating system. The CHP system and customer equipment controls require coordination such that both the CHP and customer equipment will operate properly. The Companies have been requested by certain customers to provide a complete central plant which would also include electric drive chillers and back-up boilers. The Companies have not sought Commission approval for such an expanded scope of work.

TGC/HECO-SOP-IR-10

Ref: HECO Preliminary Statement of Position. pp. 9-10, 14: HECO Companies will request approval under Rule No. 4 for approval on a contract-by-contract basis.

Will the HECO Companies agree to notify other parties to this docket until a Commission decision is reached, when they are filing for approval of user-sited DG under Rule No. 4, so affected parties can decide whether to attempt to intervene and comment on unresolved issues?

HECO Response:

The Companies will not undertake service requirements beyond those specified in the Commission's rules. Nonetheless, it may be possible to work out an informal notification process. (The Companies' position, however, is that it would be inappropriate for TGC to attempt to intervene in Rule 4 Contract filings.)

TGC/HECO-SOP-IR-11

Ref: HECO Preliminary Statement of Position, p. 10 “The utilities’ participation on a regulated basis will ensure that the interests of all customers are taken into consideration....The independent implementation of DG/CHP results in a loss of revenue to the utility and all customers are then ultimately adversely impacted by the lack of contribution to fixed costs from customers that implement third party DG/CHP.”

Energy consumers have alternative forms of energy efficient technologies, aside from DG/CHP, available to choose from that would result in lower revenues to the utility. These alternatives, like DG/CHP, also threaten the utility’s revenue. Is the utility looking to design, install, own, operate and maintain these alternative forms of energy as a way to protect the interests of non-participants? Please explain why or why not.

HECO Response:

Although it was argued in the past that the provision of DSM programs to encourage the use of energy efficient technologies was not a normal electric utility activity, the Companies provide incentives to customers through their DSM programs to encourage the use of energy efficient technologies. At the present time, the Companies received shareholder incentives and are allowed to recover net loss revenues incurred as a result of the implementation of their energy efficiency DSM programs. The Companies offer a broad array of DSM programs, which provides broad opportunities to their customers to be participants in the DSM programs.

TGC/HECO-SOP-IR-12

Ref: HECO Preliminary Statement of Position, p. 10: "Benefits should be available to the customers for whom DG/CHP is a viable option...."

- a. Please state whether the HECO companies intend to use their DG/CHP program to install user-sited CHP that does not deliver electricity to the grid (1) as a customer retention program, designed to keep third party CHP providers from "stealing" load currently served by the electric utilities, or (2) only at places on the electric system that could benefit from load reduction due to congestion or circuit overloads, or require voltage support for customers at the end of the line, etc.
- b. "... the Companies have made a limited number of proposals to customers to install and operate utility-owned CHP systems at the customers' sites..." How many such proposals (successful or unsuccessful) have been made? Of these, how many users were approached by the utility or Hess in the first instance, rather than having contacted the utility or Hess to inquire about the possibility of installing user-site CHP? How many users were made aware of the utility's intention to enter the business for providing user-site DG during DSM or conservation audits?
- c. Have the employees and contractors working with individual customers on letters of intent, memoranda of understanding, engineering studies, design work, training, preparation of the application and exhibits, and the like, recorded their time to utility or nonutility accounts? Please explain how time, expenses and overheads of company employees and outside contractors (including Hess employees, outside attorneys, and others) in conjunction with embarking on this new business venture have been accounted for.

HECO Response:

- a. If the Companies are permitted to offer CHP services on tariff based rates, the Companies will offer CHP to all customers who qualify under the terms of the tariff. CHP should be offered in all circumstances that benefit the total population of the Companies' customers.
- b. As of June 16, 2004, the Companies have made twelve CHP system proposals to customers. The Companies initiated one of these proposals in the first instance. The Companies do not consider any of the twelve proposals to have been initiated during DSM or energy conservation audits. More typically, the proposals have come about in response to customer requests for more information following Company presentations at broader forums. The

following are examples of such forums:

- Maui Hotel Association on March 28, 2003
 - Marriott Hotel Engineers on September 4, 2003
 - Pacific Coast Electrical Association on September 25-27, 2003
 - Building Industry Association on November 14, 2003
 - Engineers & Architects of Hawaii on February 6, 2004
- c. The Companies are offering CHP system services on a regulated basis, subject to Commission approval. Therefore, the time of all employees and outside consultants working on the CHP program has been charged to utility accounts. It should be noted, however, that no CHP program costs are included in the Companies' current rates.

TGC/HECO-SOP-IR-13

Ref: HECO Preliminary Statement of Position, p. 11 "...let the utility do what it does best...Manage fuel procurement for power facilities". TGC is concerned that the utilities are leveraging their market power as large buyers of fuel for central generation in the purchase of fuel in entering the new business of user-sited DG.

Please state whether the HECO companies intend to serve user-site CHP facilities with diesel purchased under the same contracts that supply the fuel used for central generation. If so, please provide copies of such contracts.

HECO Response:

Yes. To the extent such purchases of diesel fuel do not materially, adversely impact the purchase of diesel fuel for central station generation. It is generally good business practice to leverage buying power to secure lower cost goods and services. Such cost savings directly benefit the Companies' customers.

The Companies' current diesel fuel supply contracts, as well as amendments to the contracts to be effective January 1, 2005, have been filed with the Commission in Docket Nos. 97-0396 and 04-0129. Portions of the contracts contain confidential, proprietary information that has been filed (in the case of existing contracts) and will be filed (in the case of the amendment to the contracts) subject to protective orders. The Companies object to making the confidential, proprietary portions of the contracts available to any parties other than the Consumer Advocate, and note that TGC has not been required to provide confidential, proprietary portions of its fuel supply contracts to the Companies in TGC proceedings in which the Companies have participated.

TGC/HECO-SOP-IR-14

Ref: HECO Preliminary Statement of Position, p. 15: "...in the case of customer-sited CHP systems and DG owned by third-parties, the Commission's role is to review whether the retail sale of electricity by such third-party owners falls within the purview of the public utility statutes. To date, the Companies have not yet taken the position that these third-party owned installations should be regulated by the Commission, due to the relatively small number of such installations."

Please list every instance of which the HECO Companies are aware where (1) an IPP selling to a utility, or (2) a cogenerator producing power for consumption on the premises, sought and received a determination from the Hawaii PUC that it was not a public utility.

HECO Response:

This information request is unrelated to the statement in the preliminary SOP, which addressed third-party retail sales of electricity. Without researching the matter, the Companies are aware of at least three dockets that have addressed the sale of electricity by independent power producers to electric utilities, including: (1) Docket Nos. 5174 & 5175, Decision and Order No. 8203 (December 21, 1984), addressing a power purchase agreement (PPA) between Molokai Electric Company and Cummins Hawaii; (2) Docket No. 97-0213, Decision and Order No. 16396 (June 29, 1998), addressing a PPA between Kauai Electric Division and Kauai Power Partners; and (3) Docket No. 98-0013, Decision and Order No. 17077 (July 14, 1999), addressing a PPA between HELCO and Encogen Hawaii, now known as Hamakua Energy Partners. See also response to CA-IR-14 a., which refers to Docket No. 02-0182, involving the retail sale of electricity by a supplier of photovoltaic systems.

TGC/HECO-SOP-IR-15

Ref: HECO Preliminary Statement of Position, Issue 4, pp. 16-17 “If a third-party or a customer installs DG, the load to be served by the utility is reduced and the utility loses the portion of the rate normally charged to the customer to cover fixed costs. When that happens, those costs must be borne by other ratepayers when rates are adjusted at the next rate case.”

- a. Please provide copies of any cost-shifting or other DG/CHP impact studies performed by the HECO companies, in electronic format, with formulas intact. Please state all assumptions used in preparing such studies and the bases therefor.
- b. Do the HECO companies agree that the same potential load loss impacts and shifting of costs to other utility gas ratepayers can occur when the electric utilities, customers, or third-party DG providers, install DG/CHP at the sites of users who have existing utility gas load?

HECO Response:

- a. The economic benefit of retained customer load and other economic factors were analyzed in the Companies CHP Program application filed under Docket No. 03-0366 on October 10, 2003.
- b. The possibility exists, but it is much more difficult to determine in the case of TGC. A CHP system installed at a customer site could use its waste heat to displace load currently served by gas. This would not, however, impact customers of TGC’s regulated operations if the displaced gas load was served by unregulated propane sales. In addition, the CHP system could be fired by regulated SNG or propane, and result in a net increase in TGC’s regulated gas sales. If the displaced gas sales were regulated gas sales, and the CHP system was not gas-fired (and TGC did not increase its regulated gas sales overall as a result of other CHP system installations), TGC might seek to make up for the net lost revenues in its next rate case, assuming the displaced gas sales were made at rates higher than TGC’s marginal cost.

Overall, it is possible that the increased installation of CHP systems could result in a net increase in the sales of regulated SNG and propane, and a decrease in unregulated

propane sales. Because it has both regulated and unregulated gas sales, TGC may adopt strategies that attempt to limiting CHP system penetration in order to protect its unregulated propane sales at the expense of its regulated SNG and propane customers (particularly if its “excess” SNG capacity is already included in its rates).

TGC/HECO-SOP-IR-16

Ref: HECO Preliminary Statement of Position, Issue 10, pp. 30-31 rate design and cost allocation issues; see also Docket No. 03-0366 application, Ex. C, p. 4, footnote 2

- a. Please state whether, in the HECO companies' view, currently effective rate design has created an artificial demand for user-sited CHP by giving distorted signals to commercial and large power customers as to the cost of grid-furnished electric power.
- b. Please provide copies of any studies, analyses, etc. that show the impact on commercial, large power, and other rates on Maui, Hawaii and Oahu (where the Docket No. 03-0366 program is proposed to be effective) of (i) moving to class cost of service and/or (ii) recovering only fuel and variable costs in the energy charge, and/or other changes in rate design that could mitigate the problem of uneconomic bypass and concomitant revenue shortfalls.
- c. If each of the HECO companies were allowed to adjust their commercial and large power rates in their next rate cases to reflect the actual cost of serving the commercial and large power classes, please estimate, by island, the percentage of customers eligible under the Docket No. 03-0366 program for whom utility-owned, user-sited CHP would no longer be economic to install, due to insufficient savings over the rate for service from the utility grid.
- d. If the HECO companies were each allowed to adjust their commercial and large power rates in their next rate cases to reflect the actual cost of serving those classes of customers, please estimate, by island, the amount of the 77 MW of utility-owned user-sited CHP estimated in the Docket No. 03-0366 program that would no longer be economic to install, due to insufficient savings over the rate for service from the utility grid.

HECO Response:

- a. The Companies have not stated that "currently effective rate design has created an artificial demand for user-sited CHP by giving distorted signals to commercial and large power customers as to the cost of grid-finish electric power." The Companies have stated that inter-class and intra-class subsidies have created the potential for uneconomic bypass by user-sited DG.
- b. (i) The requested information is not available. The Companies have not conducted an analysis of the impact on rates of moving to class cost of service. Estimates of the rate impact of moving to full class cost of service in prior rate cases are reflected in the estimates

of inter-class subsidy. Please see HECO response to LOL-SOP-IR-70.

(ii) The requested information is not clear.

- c. The Companies have not analyzed the impact of adjusting commercial and large power rates to eliminate inter-class subsidies on the economics of installing customer-sited CHP systems.
- d. Please see response to part c. above.

TGC/HECO-SOP-IR-17

Ref: HECO Preliminary Statement of Position, p. 31 “The loss of a significant amount of load from the Company’s system due to uneconomic bypass would have an immediate and significant impact on the magnitude of the Company’s revenues....”

- a. In light of the HECO companies’ continued concerns about uneconomic bypass, do the HECO companies have any plans to request either rate cap or revenue cap PBR within the next five years? Is the companies’ proposed CHP program an alternative to PBR?
- b. The Freedman report for the Hawaii Energy Policy Forum set forth several alternatives for decoupling revenues from kWh sales (pp. 62-65). Do the HECO companies have any plans to request a form of decoupling akin to the types described in that report over the next two years?
- c. Do the HECO companies have any cost-cutting or other plans in effect to mitigate the impact of uneconomic bypass on remaining customers’ rates, outside the proposal for the utilities to own and operate user-site CHP? Please explain.

HECO Response:

- a. The Companies’ proposed CHP program is not an alternative to PBR, and any plans that the Companies may have with respect to PBR are outside the scope of this docket, and are indefinite until when and if an application is filed. (HECO’s PBR application, filed December 13, 1999 in Docket No. 99-0396, was dismissed by the Commission.)
- b. The Companies have stated why the coupling proposals are problematic on a number of occasions.
- c. The Companies always seek to manage their costs, given the need to provide service at reasonable cost.

TGC/HECO-SOP-IR-18

Ref: HECO Preliminary Statement of Position, p. 32, re pricing under Rate Schedule CHP per the application in Docket No. 03-0366, pp. 22-31.

The CHP Program contemplates a fixed discount or reduction in the price per kWh of 1 cent for HECO, 1.6 cents for HELCO, and 1.5 cents for MECO for the electricity generated by the CHP unit. These discounts assume base prices under currently approved tariffs.

- a. If the base rates for all commercial and large power customers were established based on the true costs to serve these classes, how would the amount of the “fixed discount” under the CHP Program be calculated, and what amount of discount would apply to each of Oahu, Maui, and Hawaii?
- b. If the base rates for all commercial and large power customers were established based on the true costs to serve these classes, at what level would the proposed base thermal charges of 40 cents for HECO, 45 cents for MECO, and 50 cents for HELCO be set? That is, would the HECO companies merely revamp the program to produce 10-14% savings for the customers from the new, lower, base rates, would they increase the amount of customer savings coming from the thermal component, or how would the program’s pricing be altered to reflect the new, lower electricity rates for the eligible customers?
- c. If Schedule CHP and the five-year program in Docket No. 03-0366 are approved as filed, how will the fixed discounts for each of Maui, Oahu, and Hawaii be recalculated in each company’s next rate case case? E.g., will discounts continue? Will the discounts be cost-based, value-of-site-based, loosely system-benefit-based, loosely environmental-benefit-based, market-based, geared to meet the competition, designed to achieve a certain target level of new CHP installations, or how?
- d. The HECO companies propose a minimum guaranteed annual electrical discount based on an 85% availability of the CHP system. (1) Is the 85% calculated based on the system as a whole being available 85% of the time, or each CHP unit being available 85% of the time? (2) If either the system or an individual unit is not available 85% of the time, do shareholders or other customers make good on the guaranteed savings floor for participants in Schedule CHP?

HECO Response:

- a. The electricity rate discounts for CHP system service in the proposed CHP Tariff are based on the Companies’ existing rates. The Companies have not determined what the appropriate discounts would be if the existing rates were adjusted to eliminate inter-class subsidies (which is what the Companies assume TGC means by base rates based on “the true cost to

serve these classes”), whether based on the cost of service studies for the Companies’ last general rate cases or on new cost of service studies. As stated in the CHP Program application, the actual determination of the various pricing elements was finalized by testing the impact of variations in the various pricing elements on the resulting savings to be realized by a customer and the impact on utility customers as a whole. The price levels chosen as base levels were determined to be reasonable because they resulted in a positive impact on the total customer base and yielded savings in the range believed to be expected by utility CHP customers. If the base rates for all commercial and large power customers were reestablished, the electricity price discounts for the CHP program would be reestablished for new customers based on the same considerations.

- b. Changing the base rates for commercial and large power customers would probably not result in a change in the proposed base thermal charges, given the factors considered in the establishing the base thermal charges as stated in the CHP Program application. It should also be noted that the expected revenues from the thermal charges are relatively small compared to the revenues from the sale of electricity generated by the CHP systems.
- c. See response to subpart a.
- d. The 85% factor is applied to the net capacity of the CHP system generating units, as stated in Appendix B to the Combined Heat and Power Agreement included in the proposed CHP Tariff. Since the CHP systems would be provided as a regulated utility service, the revenues and costs incurred in providing such service would be included in the utility’s revenue requirements, on normalized basis, for ratemaking purposes. The rates would include the impact of the minimum KWH guaranty only if and to the extent that the test year rate case forecast projected that individual CHP systems would be available less than 85% of the

time. At this time, the Companies' expectations with respect to the availability of the CHP systems if they were installed under the CHP Program is that the availability of such systems will be significantly higher than 85%, as indicated in the CHP Program application.

TGC/HECO-SOP-IR-19

Ref: HECO Preliminary Statement of Position, p. 36, "The process of demonstrating ratepayer benefits should be standardized."

Please set forth the HECO companies' proposal for standardizing the process of demonstrating ratepayer benefits from DG. Please state whether ratepayer benefits will be determined both before and after any installations are made.

HECO Response:

Please see the Companies' response to CA-SOP-IR-25b.

TGC/HECO-SOP-IR-20

Ref: HECO Preliminary Statement of Position, p. 39, re misunderstandings of the teaming agreement.

- a. Please describe all conditions attached to becoming a “preferred supplier” to HECO.
- b. Please state whether the HECO companies now interpret the Hess teaming agreement to give Hess an exclusive right, a right of first refusal, or otherwise, to provide design, installation and/or other services, separate and apart from equipment, CHP installations of 1 MW or under.

HECO Response:

- a. The general conditions of being a supplier to HECO are the ability to offer quality products or services that are cost competitive. Preferred suppliers tend to be those entities that are able to offer additional value to HECO and its customers through a variety of means such as special pricing, expedited ordering mechanisms, special product support, equipment standardization, and training. Ultimately, preferred suppliers must offer greater benefit to HECO and its customers than would otherwise be provided by the general supplier market.

Preferred supplier arrangements could allow the Companies to standardize on specifications and reduce overall unit costs, and thereby minimize procurement lead times, engineering requirements, inventories, and procurement costs.

- b. HECO does not interpret the Hess teaming agreement to give Hess an exclusive right, right of first refusal, or otherwise, to provide design, installation and/or other services, separate and apart from equipment, with the exception that for Hess Customers as defined in the agreement, Hess will manufacture and install the CHP systems.

TGC/HECO-SOP-IR-21

Ref: HECO Preliminary Statement of Position, Docket No. 03-0366 Ex. E p. 6, Schedule CHP Sheet 66E, Section 2 and Application p. 41.

If a potential candidate for user-site, utility-owned CHP signs a letter of intent providing for reimbursement of utility engineering expense if a final design does not achieve approximately the same level of savings as the conceptual proposal, or if the utility decides not to continue with development of the project, the utility will be responsible for the engineering costs. (p. 41). Is the proposal that the electric utility shareholders or the other ratepayers will bear those costs?

HECO Response:

The Companies' application for approval of their CHP Programs has been suspended. Specific information requests addressed to the program are beyond the scope of this docket. Generally, however, the Companies propose to own, operate and maintain CHP systems as a regulated, above-the-line activity. Reasonable costs incurred in conducting regulated activities are recoverable through rates. As a practical matter, the extent to which engineering costs for projects that do not proceed can be projected and incorporated, on a normalized basis, in revenue requirements in a rate case would have to be addressed in a rate case.

TGC/HECO-SOP-IR-22

Ref: Combined Heat and Power Agreement Section 3.5, Docket No. 03-0366 Ex. E, p. 16

- a. What costs will the HECO companies take into account in determining the total actual cost of fuel separately metered and sold to the customer for uses other than to power utility-owned CHP equipment?
- b. If the chosen fuel is propane, please state what costs the HECO companies will take into account in determining the total actual cost of fuel separately metered and sold to the customer for uses other than to power utility-owned CHP equipment.

HECO Response:

- a. As proposed in the CHP Agreement for HECO for the Companies' CHP Program, "HECO (the Companies) will, at its expense, purchase the fuel necessary to operate the CHP System. The Host will normally procure its own fuel supply for its back-up thermal energy system for its cooling and/or heating loads. When using the Host's existing fuel tank(s), HECO will, at its expense, install meters to meter the fuel used by the CHP System as well as the fuel used by the Host for its back-up thermal energy system for its cooling or heating. In such circumstances, the Host shall reimburse HECO for the total actual cost of such fuel provided by HECO, including taxes."

The total actual cost of diesel fuel would be based on the metered Host consumption at a fuel cost rate including the following items, the base fuel cost, taxes (including the environmental response tax), transportation, wharfage, storage, and other costs associated with the procurement of the fuel at the Host site.

- b. For propane fuel, the Companies may or may not follow a process similar to that described in subpart a. If the Host is able to purchase propane at a lower cost than that offered to the Companies, the Host would purchase the fuel and the Companies would reimburse the Host for the CHP system fuel consumption at an agreed upon fuel rate. This fuel purchase

agreement would be submitted to the Commission for its review and approval.

TGC/HECO-SOP-IR-23

Ref: Docket No. 03-0366, Ex. C, page 9, concerning organizational changes implemented at HECO to pursue utility-owned CHP

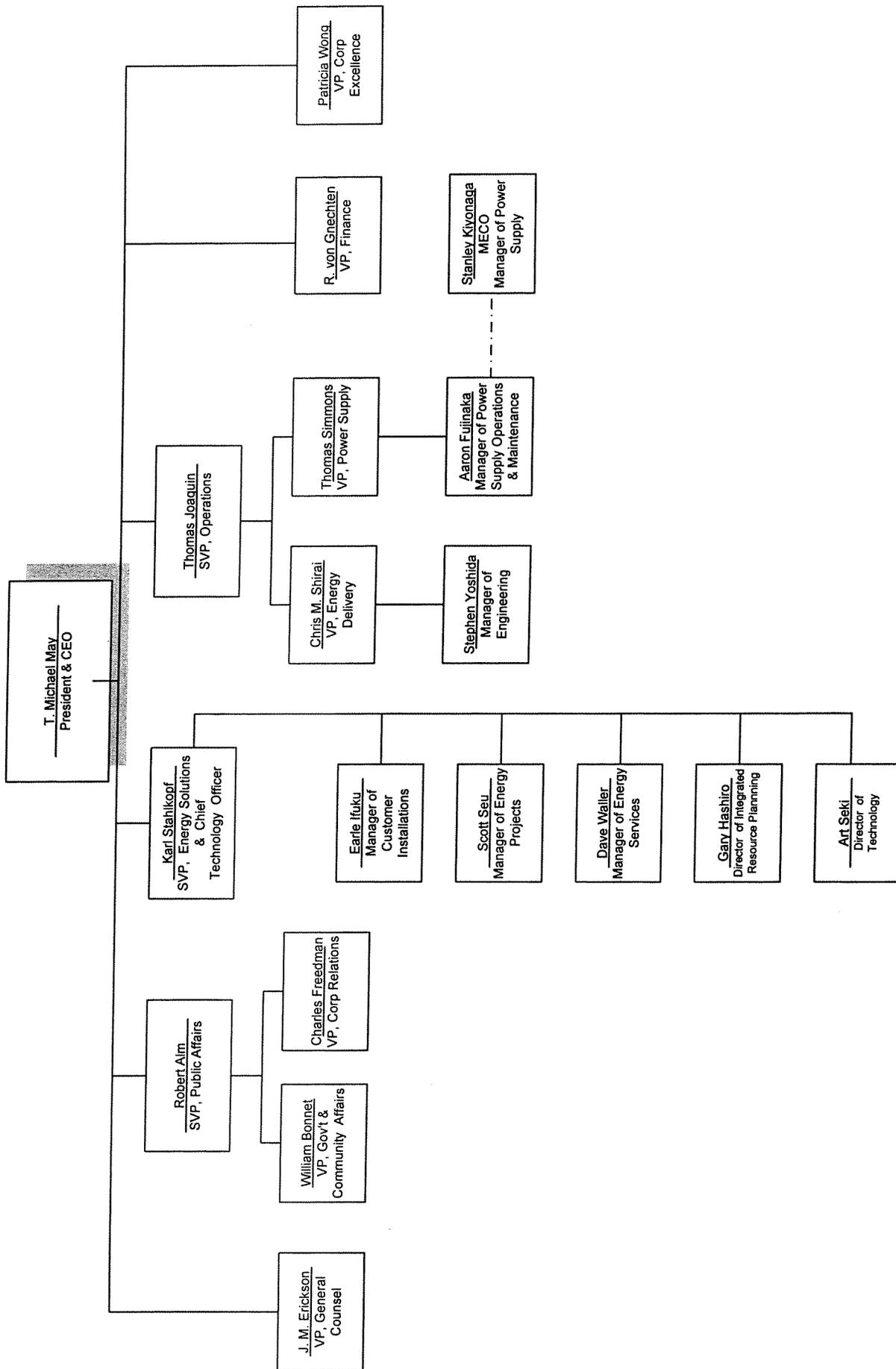
Please provide a current organizational chart that includes at least the following departments and their reporting relationships: Energy Solutions, Energy Projects, Customer Installations, Energy Services, Technology, Integrated Resources Planning, the department(s) responsible for doing engineering studies for and approving third-party DG interconnection requests, the MECO Power Supply Department, the department(s) responsible for qualifying customers for, approving and offering customer retention discounts, the departments responsible for conducting or overseeing energy conservation audits and administering or offering DSM funds.

HECO Response:

See the attached simplified organizational chart for HECO.



Hawaiian Electric Company, Inc.



TGC/HECO-SOP-IR-24

Ref: Docket No. 03-0366 CHP application, Exhibit H

- a. Exhibit H specifically excludes the labor costs of the members of the Energy Products Department. Please state which other employees' labor costs, including Energy Solutions, Customer Installations, Energy Services, Technology, IRP, Interconnections, MECO Power Supply, etc., were included in the Exhibit H analysis. If not, please provide an estimate of their costs and state any assumptions used.
- b. In doing their economic analyses, the HECO companies used a utility system CHP availability of 91%, or 8,000 hours per year. Please state the basis for this figure.

HECO Response:

- a. The CHP Program application states (page 9): "The basic development and administration of the CHP Program has been assigned to the Energy Projects Department at HECO. This Department is responsible for assisting HECO, HELCO and MECO in the development of detailed CHP system proposals, the management of CHP project development and construction, and the startup of CHP systems. A majority of the costs for this work will be included in the capital costs for the individual CHP projects. The anticipated annual labor and related overheads expense level for preliminary program work and administration for the Companies by the Energy Projects Department is approximately \$250,000. Personnel assigned to the Energy Projects Department are the only staffing additions being made for the CHP Program. These support expenses are not accounted for in the economic analyses of the subject CHP Program, but the results of the analyses indicate that this level of costs can be supported by the CHP Program."

The capital cost estimates include the capitalized costs of HECO labor, including that of the Energy Project Department, under items such as project engineering, project management and other project support such as interconnection, metering, customer

installations, environmental, etc. The O&M expense cost estimates include all labor costs for maintenance activities. (See CHP Program application, pages 50-51.)

- b. The Companies used the Hess recommended maintenance schedule and consultation with MECO in developing the estimated 91% availability for the utility CHP systems. The Hess recommended maintenance schedule along with the basis for the 91% availability is provided below.

OUTAGE HOURS							Cum. Run Hours	Scheduled Maintenance
Month	Oil Change	Air Filter	Trouble	Maint	Total Outage Hr			
1	2		50	10	62	730	Change oil every 750 hrs	
2	2	1	50	10	63	1,460		
3	2		50	10	62	2,190		
4	3	1	50	10	64	2,920	Retorque heads every 3,000 hrs	
5	2		50	10	62	3,650		
6	2	1	50	10	63	4,380		
7	2		50	10	62	5,110		
8	2	1	50	10	63	5,840		
9	3		50	10	63	6,570	Retorque heads every 3,000 hrs	
10	2	1	50	10	63	7,300		
11	2		50	10	62	8,030		
12	2	1	50	10	63	8,760		
13	3		50	10	63	9,490	Retorque heads every 3,000 hrs	
14	2	1	50	10	63	10,220		
15	2		50	10	62	10,950		
16	2	1	50	32	85	11,680	Top end inspection	
17	2		50	10	62	12,410		
18	2	1	50	10	63	13,140		
19	2		50	10	62	13,870		
20	2	1	50	10	63	14,600		
21	3		50	10	63	15,330	Retorque heads every 3,000 hrs	
22	2	1	50	10	63	16,060		
23	2		50	10	62	16,790		
24	2	1	50	10	63	17,520		
25	3		50	10	63	18,250	Retorque heads every 3,000 hrs	
26	2	1	50	10	63	18,980		
27	2		50	10	62	19,710		
28	2	1	50	10	63	20,440		
29	3		50	10	63	21,170	Retorque heads every 3,000 hrs	
30	2	1	50	10	63	21,900		
31	2		50	10	62	22,630		
32	2	1	50	10	63	23,360		
33	2		50	88	140	24,090	Top/Bottom inspection	

Total outage hours over 33 months
2,168.0

Total hours in 33 months
24,090.0

Normalized outage hours over 12-months
788.36
9.000% 91.000% Availability

2,168 Total outage hours over 33-months