

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF HAWAII

----- In the Matter of -----)
)
PUBLIC UTILITIES COMMISSION)
)
Instituting a Proceeding)
Related to a Competitive)
Bidding Process for Renewable)
Energy on Oahu.)
_____)

DOCKET NO. 2007-0331

ORDER NO. 23699

Filed Oct. 9, 2007
At 11 o'clock A.M.

Karen Higashi
Chief Clerk of the Commission

DIV. OF CONSUMER ADVOCACY
DEPT. OF COMMERCE AND
CONSUMER AFFAIRS
STATE OF HAWAII

2007 OCT 11 P 3:47

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ATTEST: A True Copy
KAREN HIGASHI
Chief Clerk, Public Utilities
Commission, State of Hawaii.

Karen Higashi

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Docket No. 2007-0331

Order No. **23699**

Order

By this Order, the commission opens this docket, pursuant to the Framework for Competitive Bidding dated December 8, 2006, to receive filings, review approval requests, and resolve disputes, if necessary, related to HAWAIIAN ELECTRIC COMPANY, INC.'s ("HECO") proposal to proceed with a competitive bidding process to acquire approximately 100 MW of non-firm renewable energy for the Island of Oahu ("Competitive Bidding Process").

I.

Background

A.

Framework

By Decision and Order No. 23121, filed on December 8, 2006, in Docket No. 03-0372 ("Competitive Bidding Docket"), the commission adopted a Framework for Competitive Bidding ("Framework") to govern competitive bidding as a mechanism for acquiring new energy generation in Hawaii. Under the Framework,

competitive bidding is the required mechanism for acquiring a future generation resource or a block of generation resources, subject to certain conditions and exceptions.¹ The process of acquiring a future generation resource through a competitive bidding process is described in the Framework.

As a general matter, the "primary role" of the commission in a competitive bidding process is to ensure that each competitive bidding process "is fair in its design and implementation so that selection is based on the merits"; that projects selected through a competitive bidding process are consistent with the utility's approved integrated resource plan ("IRP"); that the utility's actions represent prudent practices; and that throughout the process, the utility's interests are aligned with the public interest even where the utility has dual roles as designer and participant.²

To assist the commission, the Framework requires the use of an Independent Observer when the utility or its affiliate seeks to advance a project proposal or when the commission otherwise determines.³ The Independent Observer has numerous obligations under the Framework, which include monitoring all steps in the competitive bidding process, including the communications between the utility and bidders; certifying to the commission at various stages of the competitive bidding process that the utility's judgments create no unearned advantage for the

¹Framework, Section II.A.3, at 3-4.

²Framework, Section III.B.1, at 12.

³Framework, Section III.C.1, at 13.

utility; advising the utility on its decision-making during the various stages of the competitive bidding process; and reporting to the commission on its monitoring results during each stage of the process.⁴

The commission's duties in a competitive bidding process are also delineated in the Framework. Specifically:

- The commission will review, and at its option, approve or modify, each proposed RFP before it is issued, including any proposed form of contracts and other documentation that will accompany the RFP.
- The commission shall be the final arbiter of disputes that arise among parties in relation to a utility's competitive bidding process, to the extent described in Part V of the Framework.
- The commission shall review, and approve or reject, the contracts that result from competitive bidding processes conducted pursuant to the Framework, in a separate docket upon application by the utility in which the expedited process in Part III.B.8 of the Framework shall not apply. In reviewing such contracts, the commission may establish review processes that are appropriate to the specific circumstances of each solicitation, including the time constraints that apply to each commercial transaction.
- If the utility identifies its self-build or turnkey project as superior to bid proposals, the utility shall seek commission approval in keeping with established CIP Approval Requirements.
- The commission shall review any complaint that the electric utility is not complying with the Framework, pursuant to Part V of the Framework.

Framework, Section III.B, at 12-13.

As "[t]imely [c]ommission review, approval, consent, or other action described in this Framework is essential to the

⁴Framework, Section III.C.2, at 13-15.

efficient and effective execution of this competitive bidding process," the commission implemented an expedited procedure for competitive bidding processes.⁵ "[W]henever Commission review, approval, consent, or action is required under th[e] Framework, the [c]ommission may do so in an informal expedited process. The [c]ommission hereby authorizes its Chairman, or his designee (which designee, may be another Commissioner, a member of the [c]ommission staff, [c]ommission hearings officer, or a [c]ommission hired consultant), in consultation with other Commissioners, [c]ommission staff, and the Independent Observer, to take any such action on behalf of the [c]ommission."⁶

In addition, according to the Framework, "[t]he [c]ommission will serve as an arbiter of last resort, after the utility, Independent Observer, and bidders have attempted to resolve any dispute or pending issue."⁷ In resolving disputes, the commission will use the informal expedited process described above within thirty (30) days and "[t]here shall be no right to hearing or appeal from this informal expedited dispute resolution process."⁸

⁵Framework, Section III.B.8, at 13.

⁶Framework, Section III.B.8, at 13.

⁷Framework, Section V, at 28.

⁸Framework, Section V, at 28.

B.

HECO Letters

By letters dated and filed on September 24, 2007, HECO requested commission approval "to proceed with a competitive bidding process to acquire up to approximately 100 MW of non-firm renewable energy for the Island of Oahu" and for approval of a contract between HECO and New Energy Opportunities, Inc. for an Independent Observer to oversee that Competitive Bidding Process ("Independent Observer Contract"). HECO also notified the commission that it would be issuing a Solicitation of Interest ("SOI") by September 28, 2007.

By letter dated and filed on September 28, 2007, HECO provided the commission with the SOI. According to HECO, "[t]he purpose of the SOI is to preliminarily determine the interest of suppliers in responding to a planned Request for Proposal ('RFP') to supply non-firm renewable energy for the island of Oahu, and to obtain background from potential suppliers."⁹

All three letters (collectively, the "HECO Letters"), which are attached to this Order, were filed in the Competitive Bidding Docket and in Docket No. 03-0253 related to HECO's third integrated resource plan ("IRP-3 Docket"). Those dockets, however, were not intended for the filing of documents related to the Competitive Bidding Process described in the HECO Letters. The IRP-3 Docket was opened to examine and

⁹Letter from William Bonnet, HECO's Vice President of Government and Community Affairs dated and filed September 28, 2007, at 1.

develop HECO's IRP-3. By stipulation approved by the commission on March 21, 2007, the parties to that docket agreed to dispose of the proceeding in toto, without an evidentiary hearing, and instead, proceed with the development of HECO's IRP-4.¹⁰ Following the filing of HECO's Evaluation Report for its IRP-3, the docket was deemed closed.¹¹ Likewise, the purpose of the Competitive Bidding Docket was to evaluate competitive bidding as a mechanism for acquiring or building new generation capacity in the State. Once the remaining issue in that docket related to approval of interconnection and transmission tariffs is resolved, that docket will also be closed.

II.

Initiation of This Docket

A.

Authority

As there appears to be a need for a central location for filings related to the Competitive Bidding Process described in the HECO Letters, and to provide a forum for any necessary review and resolution of disputes, pursuant to the Framework, the commission opens this docket.

In doing so, the commission notes that it is not negating any of the requirements of the Framework by opening this docket; indeed, this docket is intended to facilitate in fulfilling the requirements of the Framework. As such, the

¹⁰See Order No. 23312, filed on March 21, 2007, in Docket No. 03-0253.

¹¹Id. at 13.

duties and obligations of the utility, as delineated in the Framework continue to apply. Likewise, the commission's involvement in the Competitive Bidding Process remains as described in the Framework. Any commission review, approval, consent, or action required under the Framework will be addressed through the informal expedited process, as set forth in Sections III.B.8 and V of the Framework. As such, the commission does not consider this docket a contested case proceeding. It merely is a repository for the requisite filings, and a forum for resolution of approval requests and disputes in the manner and under the circumstances described in the Framework.

Any subsequent filings related to the Competitive Bidding Process identified in the HECO Letters should be filed in this docket. This is not a requirement that all documents generated in connection with the Competitive Bidding Process be filed in this docket; only those filings required by the Framework or deemed necessary or desirable by HECO, any interested parties, or the commission, should be filed in this docket.

All matters that may require commission approval related to the Competitive Bidding Process described in the HECO Letters, with the exception of the approval of any contracts that may result from the Competitive Bidding Process,¹² will be resolved in this docket.

¹²Framework, Section III.B.4, at 13.

B.

Named Parties

As this docket pertains to HECO's Competitive Bidding Process, the commission names HECO as a party to this proceeding. The commission also names the DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS, DIVISION OF CONSUMER ADVOCACY (the "Consumer Advocate"), the agency statutorily mandated to represent, protect, and advance the interests of consumers of utility service and an ex officio party to commission proceedings.¹³

In addition, as the HECO Letters were filed in the Competitive Bidding and IRP-3 Dockets, the commission will provide a copy of this order to all individuals and entities that were parties to those dockets. In doing so, the commission is not suggesting that all of the parties to those dockets have standing to intervene, but instead is merely providing notice of the disposition of the HECO Letters.

C.

Protective Order

If a protective order to govern the treatment of certain documents is desired, the parties (and intervenors and participants, if any) shall file a stipulated protective order for the commission's review and approval within forty-five (45) days from the date of this Order. If the parties (and intervenors and participants, if any) are unable to stipulate, each party or participant shall file proposed

¹³HRS § 269-51; HAR § 6-61-62.

protective orders for the commission's review and consideration within the forty-five (45)-day filing deadline.

III.

HECO's Letter Requests

As noted above, the HECO Letters contain requests for approval of the Competitive Bidding Process and the Independent Observer Contract. As noted above, Section II.B.8 of the Framework states that "[t]imely [c]ommission review, approval, consent, or other action described in this Framework is essential to the efficient and effective execution of this competitive bidding process."¹⁴ Accordingly, "whenever [c]ommission review, approval, consent, or action is required under this Framework, the [c]ommission may do so in an informal expedited process" which allows the Chairman, or his designee in consultation with other Commissioners, commission staff, and the Independent Observer, to take any such action on behalf of the commission.¹⁵ As the commission is cognizant of the terms of the Framework and the timing of HECO's Competitive Bidding Process, the commission will review HECO's letter requests.

A.

Competitive Bidding Process

In its letter dated and filed on September 24, 2007, HECO requested commission approval "to proceed with a competitive

¹⁴Framework, Section III.B.8, at 13.

¹⁵Framework, Section III.B.8, at 13.

bidding process to acquire up to approximately 100 MW of non-firm renewable energy for the Island of Oahu, as identified in HECO's IRP-3 2007 Evaluation Report filed on May 31, 2007, in Docket No. 03-0253."¹⁶ According to HECO, its request was made pursuant to Section II.C.3 of the Framework. Section II.C.3 states:

A determination shall be made by the Commission in an IRP proceeding as to whether a competitive bidding process shall be used to acquire a generation resource or a block of generation resources that is included in the IRP. Actual competitive bidding for IRP-designated resources will normally occur after the IRP is approved, through an RFP, which is consistent with the IRP approved by the Commission. However, during the transition into competitive bidding processes for new generation under this Framework, if the IRP in effect was approved prior to the effective date of this Framework, a utility shall initiate competitive bidding (or request a waiver under Part II.A.4) as may be required by this Framework. As required by the IRP Framework, such projects must be identified in or consistent with the IRP in effect at the time.

Framework, Section II.C.3, at 8.

In drafting the Framework, the commission had intended that competitive bidding be integrated into IRP, as follows:

4. Integration of competitive bidding into IRP. The general approach to integration has four parts, in sequence:
 - a. The electric utility conducts an IRP process, culminating in an IRP that identifies a preferred resource plan (including capacity, energy, timing, technologies, and other

¹⁶Letter from William Bonnet, HECO's Vice President of Government and Community Affairs dated and filed September 24, 2007, at 1.

preferred attributes). This IRP shall identify those resources for which the utility proposes to hold competitive bidding, and those resources for which the utility seeks a waiver from competitive bidding, and shall include an explanation of the facts supporting a waiver, based on the waiver criteria set forth in Part II.A.3, above.

- b. The Commission approves, modifies, or rejects the IRP, including any requests for waiver, under the IRP Framework and this Framework.
- c. The electric utility conducts a competitive bidding process, consistent with the IRP; such process shall include the advance filing of a draft RFP with the Commission, which shall be consistent with the IRP.
- d. The electric utility selects a winner from the bidders. (But see Part II.C.6, below, concerning the process when there are no bidders worth choosing.).

Framework, Section II.C.4, at 8.

Here, the Competitive Bidding Process identified in the HECO Letters was not included in an IRP approved by the commission. As such, the commission never made a determination in an IRP proceeding as to whether a competitive bidding process shall be used to acquire the generation resource(s) at issue, i.e., 100 MW of non-firm renewable energy for Oahu. While HECO cites to the IRP-3 Evaluation Report it filed in Docket No. 03-0253, the contents of that Evaluation Report were never approved by the commission, and the report was not intended to constitute an approved IRP plan.

Recognizing that there may be a transition period following the adoption of the Framework for acquisition of a particular generation resource that was not included in an approved IRP plan, the Framework states:

. . . . However, during the transition into competitive bidding processes for new generation under this Framework, if the IRP in effect was approved prior to the effective date of this Framework, a utility shall initiate competitive bidding (or request a waiver under Part II.A.4) as may be required by this Framework. As required by the IRP Framework, such projects must be identified in or consistent with the IRP in effect at the time

Framework, Section II.C.3, at 8 (emphasis added). Thus, in the circumstance where the IRP in effect was approved prior to the effective date of the Framework, the utility is required to initiate competitive bidding "as may be required by the Framework."

The Framework generally requires competitive bidding by default, even without a commission determination in an IRP proceeding that it is required:

Competitive bidding, unless the Commission finds it to be unsuitable, is established as the required mechanism for acquiring a future generation resource or block of generation resources, whether or not such resource has been identified in a utility's IRP.

Framework, Section II.A.3, at 3 (emphasis added). Accordingly, since competitive bidding is required by default under the Framework, no commission approval at this juncture is required.¹⁷

However, the commission, as provided in the Framework, will review HECO's RFP; and, in doing so, will assess at that time whether the RFP and the Competitive Bidding Process described in the RFP complies with the requirements of the Framework.

¹⁷On the other hand, if HECO desired to forego the competitive bidding process, it would have to request a waiver under Part II.A.4 of the Framework.

B.

Independent Observer Contract

By letter dated and filed on September 24, 2007, HECO also requested commission approval of the Independent Observer Contract. With respect to selection and contracting of the Independent Observer, the Framework states:

6. Selection and contracting. The electric utility shall: (a) identify qualified candidates for the role of Independent Observer (and also shall consider qualified candidates identified by the Commission and prospective participants in the competitive bidding process); (b) seek and obtain Commission approval of its final list of qualified candidates; and (c) select an Independent Observer from among the Commission-approved qualified candidates. The electric utility's contract with the Independent Observer shall be acceptable to the Commission, and provide, among other matters, that the Independent Observer: (a) report to the Commission and carry out such tasks as directed by the Commission, including the tasks described in this Framework; (b) cannot be terminated and payment cannot be withheld without the consent of the Commission; and (c) can be terminated by the Commission without the utility's consent, if the Commission deems it to be in the public interest in the furtherance of the objectives of this Framework to do so. The utility may recover prudently incurred Independent Observer costs from its customers upon approval of the Commission in a rate case or other appropriate proceeding, and may defer the costs prudently incurred for the Independent Observer (i.e., deferred accounting).

Framework, Section II.C.6, at 16.

Here, HECO has already submitted a list of Independent Observer candidates, which the commission approved in the Competitive Bidding Docket.¹⁸ From that approved list of Independent Observers, HECO entered into a contract with

¹⁸See Decision and Order No. 23503, filed on June 22, 2007, in Docket No. 03-0372.

New Energy Opportunities, Inc. to act as Independent Observer for HECO's Competitive Bidding Process. HECO requests commission approval of that contract.

As noted above, a utility is only required to obtain the services of an Independent Observer when the utility or its affiliate seeks to advance a project proposal or when the commission otherwise determines.¹⁹ According to HECO, it is not planning on advancing a project proposal, but seeks the services of an Independent Observer "to provide valuable advice and guidance on the competitive bidding processes that are utilized, including HECO's treatment of all bidders the same in terms of access to information, time of receipt of information, and response to questions."²⁰

Given that this is the first competitive bidding process since the commission's adoption of the Framework, the commission agrees with HECO that an Independent Observer will be able to assist HECO in complying with the Framework in conducting the Competitive Bidding Process. The Independent Observer should also be able to provide information and insight to the commission to enable the commission to ensure that the process is fair in its design and implementation.

With respect to the Independent Observer Contract, the Framework requires that it be "acceptable to the [c]ommission, and provide, among other matters, that the Independent Observer:

¹⁹Framework, Section III.C.1, at 13.

²⁰Letter from William Bonnet, HECO's Vice President of Government and Community Affairs dated and filed September 24, 2007, at 2.

(a) report to the [c]ommission and carry out such tasks as directed by the [c]ommission, including the tasks described in this Framework; (b) cannot be terminated and payment cannot be withheld without the consent of the [c]ommission; and (c) can be terminated by the [c]ommission without the utility's consent, if the [c]ommission deems it to be in the public interest in the furtherance of the objectives of this Framework to do so."²¹

Having reviewed the Independent Observer Contract, it appears that all of the provisions required by the Framework are included in the contract, and, as a whole, the contract is acceptable to the commission. Accordingly, the commission approves the Independent Observer Contract.

C.

SOI

By letter dated and filed on September 28, 2007, HECO provided the commission with an SOI. According to HECO, the objectives of the SOI are to: 1) "[s]upport the timely acquisition of a significant increment of the best as-available renewable energy resources the market can produce on Oahu to meet Renewable Portfolio Standard ('RPS') requirements"; 2) "[s]timulate and expand the prospective bidder market by providing advance notice of a planned RFP issuance"; 3) provide adequate time for prospective bidders to assemble well-developed bids; and 4) "[p]rovide an opportunity for bidders to comment on

²¹Framework, Section II.C.6, at 16.

the anticipated preliminary RFP scope and desired resource characteristics."²²

As a general matter, the Framework does not require the utility to produce an SOI; and, as such, the commission appreciates HECO's plans to proceed with an SOI, as consistent with the objectives HECO outlined in its September 28, 2007 letter. In particular, the commission would like to ensure that the Competitive Bidding Process "enable the comparison of a wide range of supply-side options,"²³ "encourage participation from a full range of prospective bidders"²⁴ and "provide an opportunity for bidders to comment on the anticipated preliminary RFP scope and desired resource characteristics."²⁵

HECO states that its proposed draft RFP will be submitted to the commission for its review and approval and will be made available to interested parties for comment by year-end 2007. Under the Framework, the following process should take place prior to distributing the RFP:

6. The process leading to the distribution of the RFP shall include the following steps (each step to be monitored and reported on by the Independent Observer), unless the Commission modifies this process for a particular competitive bid:

²²Letter from William Bonnet, HECO's Vice President of Government and Community Affairs dated and filed September 28, 2007, at 2.

²³Framework, Section II.B.2, at 7.

²⁴Framework, Section II.B.3, at 7.

²⁵Letter from William Bonnet, HECO's Vice President of Government and Community Affairs dated and filed September 28, 2007, at 2.

- a. The utility designs a draft RFP, then files its draft RFP and supporting documentation with the Commission;
- b. The utility holds a technical conference to discuss the draft RFP with interested parties (which may include potential bidders);
- c. Interested parties submit comments on the draft RFP to the utility and the Commission;
- d. The utility determines whether and how to incorporate recommendations from interested parties in the draft RFP;
- e. The utility submits its final, proposed RFP to the Commission for its review and approval (and modification if necessary) according to the following procedure:
 - (i) The Independent Observer shall submit its comments and recommendations to the Commission concerning the RFP and all attachments, simultaneously with the electric utility's proposed RFP.
 - (ii) The utility shall have the right to issue the RFP if the Commission does not direct the utility to do otherwise within thirty (30) days after the Commission receives the proposed RFP and the Independent Observer's comments and recommendations.

Framework, Section IV.B.6, at 19.

As set forth in Section IV.B.6, HECO's draft and proposed RFP, and any comments related to the draft RFP, as well as comments and recommendations by the Independent Observer on the proposed RFP, shall be filed in this docket. Any comments by interested parties on the draft RFP, pursuant to Section IV.B.6.c, shall be filed in this docket and served on the utility no later than thirty (30) days after the technical conference to discuss the draft RFP with interested parties, see Section IV.B.6.b.

IV.

Orders

THE COMMISSION ORDERS:

1. This docket is opened to receive filings, review approval requests, and resolve disputes, if necessary, related to HECO's proposal to proceed with a competitive bidding process to acquire approximately 100 MW of non-firm renewable energy for the Island of Oahu.

2. HECO and the Consumer Advocate are parties to this docket.

3. If a protective order to govern the treatment of certain documents is desired, the parties (and intervenors and participants, if any) shall file a stipulated protective order for the commission's review and approval within forty-five (45) days of the date of this Order. If they are unable to stipulate, each party, (intervenor or participant, if any) shall file a proposed protective order for the commission's review and consideration within the forty-five (45) day filing deadline.

4. The contract between HECO and New Energy Opportunities, Inc. for an Independent Observer to oversee HECO's Competitive Bidding Process, is approved.

5. Any comments by interested parties on the draft IRP, pursuant to Section IV.B.6.c, shall be filed in this docket and served on the utility no later than thirty (30) days after the technical conference to discuss the draft RFP with interested parties.

DONE at Honolulu, Hawaii OCT - 9 2007.

PUBLIC UTILITIES COMMISSION
OF THE STATE OF HAWAII

By Carlito P. Caliboso
Carlito P. Caliboso, Chairman

By John E. Cole
John E. Cole, Commissioner

By Leslie H. Kondo
Leslie H. Kondo, Commissioner

APPROVED AS TO FORM:

Stacey Kawasaki Djou
Stacey Kawasaki Djou
Commission Counsel

Comp Bid Opening Order.eh



September 24, 2007

William A. Bonnet
Vice President
Government & Community Affairs

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

PUBLIC UTILITIES
COMMISSION

2007 SEP 24 P 4:17

FILED

Dear Commissioners:

Subject: Docket Nos. 03-0253 and 03-0372
Integrated Resource Planning and Competitive Bidding

Hawaiian Electric Company, Inc. ("HECO") respectfully submits this request for approval from the Public Utilities Commission of the State of Hawaii (the "Commission") to proceed with a competitive bidding process to acquire up to approximately 100 MW of non-firm renewable energy for the Island of Oahu, as identified in HECO's IRP-3 2007 Evaluation Report filed on May 31, 2007 in Docket No. 03-0253.

This request is filed pursuant to Section II.C.3 of the Framework for Competitive Bidding dated December 8, 2006 (the "Framework"), adopted by the Commission in Decision and Order No. 23121 ("D&O 23121"). Section II.C.3 of the Framework states in relevant part that: "A determination will be made by the Commission in an IRP proceeding as to whether a competitive bidding process shall be used to acquire a generation resource or a block of generation resources that is included in the IRP."

In Section 4.2.5 of HECO's IRP-3 2007 Evaluation Report, HECO identified its intent to issue a Solicitation of Interest ("SOI") and a Request For Proposals ("RFP") for up to approximately 100 MW of non-firm renewable energy and acknowledged the need to obtain a waiver or similar approval from the Commission to proceed with issuance of the RFP.¹ The Commission, however, has not had the opportunity in Docket No. 03-0253 to make a determination as to whether a competitive bidding process should be used to acquire this recently

¹ In Order No. 23312, issued March 21, 2007, in Docket No. 03-0253, the Commission approved a Stipulation Regarding Hearing and Commission Approval ("Stipulation") filed by HECO, Life of the Land and the Department of Commerce and Consumer Affairs, Division of Consumer Advocacy ("Consumer Advocate") (referred to jointly as the "Parties"), in which the Parties agreed to dispose of the proceeding regarding HECO's IRP-3 in toto, without an evidentiary hearing, and instead, proceed with the development of HECO's IRP-4. The same stipulation provided for the filing of the IRP-3 Evaluation Report.

identified block of up to approximately 100 MW of non-firm renewable generation. This submission is intended to provide the Commission with the opportunity to review the issue and make an appropriate determination.

The proposed scope of the RFP is 100 MW. The proposed scope takes into account (1) the expectation that up to 60 MW of non-firm renewable energy will be acquired on the HECO system through power purchase agreements with developers of proposed projects that are exempt from the Framework (hereafter referred to as "grandfathered proposals"), (2) the infrastructure available to bring these resources on-line in a timely manner (i.e., the amount of additional non-firm energy that can be accepted without significant, time-consuming transmission or sub-transmission system improvements), (3) operational and reliability issues associated with incorporating relatively large amounts of intermittent non-dispatchable generation into our system, (4) the need to prudently manage the acquisition of these non-firm intermittent resources in an incremental manner to gain critical operational experience and pending further system analyses, so as not to inadvertently foreclose future opportunities to add more renewable resources, and (5) the desire to follow a responsible and systematic approach toward meeting HECO's Renewable Portfolio Standards ("RPS").

The Proposed RFP

The proposed RFP would be submitted to the Commission for consideration on or about year-end 2007², requesting bids for a total of approximately 100 MW of non-firm renewable energy, with a desired service date for the resource or resources³ totaling up to 100 MW in the 2010 to 2012 timeframe. The SOI will be issued by September 28, 2007, announcing HECO's intent to proceed with the RFP.

The RFP will ask bidders to provide a base proposal for their project that will provide up to 100 MW of non-firm renewable energy and may also allow bidders to submit alternate proposals for larger increments of non-firm renewable energy if they choose to do so. All properly submitted proposals will be accepted and evaluated. A more detailed technical analysis will be conducted based on the types of proposals received, taking into account the status of the grandfathered proposals, to determine the optimum amount of non-firm renewable energy that will be selected and awarded through the RFP process.

HECO recognizes that the acquisition of a second block of renewable energy is likely to be a desired objective of the HECO IRP-4 planning process presently underway. To not foreclose the ability of the HECO system to take on more renewable energy later, relatively strict operating performance standards will be required from those non-firm renewable energy

² Issuance of an RFP by year-end 2007 that is consistent with all of the requirements of the Framework, including a Commission approved code of conduct applicable to bids by the utility or its affiliate, is ambitious. To simplify and expedite the proposed RFP process, it is anticipated that no utility or affiliate bid will be submitted for this non-firm renewable resource RFP.

³ A possible outcome of the RFP may be an award of more than one power purchase agreement.



resources presently being sought both through the ongoing IPP negotiations and the planned RFP.

HECO does not plan to participate as a bidder in this RFP for non-firm energy resources. Nonetheless, HECO still intends to retain the services of an Independent Observer to provide valuable advice and guidance on the competitive bidding processes that are utilized, including HECO's treatment of all bidders the same in terms of access to information, time of receipt of information, and response to questions.⁴ A copy of the proposed contract with the selected Independent Observer will be provided to the Commission under separate cover letter.

In accordance with Section IV.B.6 of the Framework, the process leading to the distribution of the RFP is proposed to include the following steps:

- a. HECO designs a draft RFP, then files its draft RFP and supporting documentation with the Commission;
- b. HECO holds a technical conference to discuss the draft RFP with interested parties, including potential bidders;
- c. Interested parties submit comments on the draft RFP to HECO and the Commission;
- d. HECO determines whether and how to incorporate recommendations from interested parties in the draft RFP;
- e. HECO submits its final, proposed RFP to the Commission for its review and approval (and modification if necessary);
- f. The Independent Observer submit its comments and recommendations to the Commission concerning the RFP and all attachments, simultaneously with HECO's proposed RFP; and
- g. HECO can issue the RFP if the Commission does not direct HECO to do otherwise within 30 days after the Commission receives the proposed RFP and the Independent Observer's comments and recommendations.

Timing of the RFP

The purpose of issuing the RFP now is to accelerate the addition of renewable energy resources on Oahu, while proceeding in a systematic manner that takes into account the existing infrastructure and mix of generation on the system and the ability of the system to absorb non-firm or intermittent energy resources while maintaining system reliability.

⁴ Section IV.H.2. of the Framework.



Oahu has made great strides in developing electrical energy savings brought about by the use of energy efficiency technologies and by the use of renewable displacement or off-set technologies, including solar water heating, but lags the Neighbor Islands in developing electrical energy generated using renewable energy.

HELCO's net-to-system energy requirements are estimated to be approximately 1,299 GWh in 2008, of which approximately 413.4 GWh are estimated to be electrical energy generated using renewable energy, including 239.4 GWh from geothermal, 121.1 GWh from wind, and 52.9 GWh from run-of-the-river hydroelectric. MECO's net-to-system energy requirements on Maui are estimated to be approximately 1,312 GWh in its 2007 test year rate case, of which approximately 214 GWh are estimated to be electrical energy generated using renewable energy, including 90 GWh from biomass, 123 GWh from wind, and 1 GWh from run-of-the-river hydroelectric. In contrast, HECO's net-to-system energy requirements on Oahu are estimated to be approximately 8,113.0 GWh in its 2007 test year rate case, of which approximately 384.1 GWh are estimated to be electrical energy generated using renewable energy, including 337.4 GWh from H-Power's waste-to-energy facility.

On Oahu, HECO is continuing discussions with developers of certain "grandfathered proposals" pursuant to exemptions from the Framework for certain offers to sell energy or capacity by non-fossil fuel producers submitted before adoption of the Framework.⁵ It is anticipated that the process could result in power purchase agreements for up to a total of approximately 60 MW of as-available renewable energy. The amount of non-firm renewable generation ultimately awarded in the RFP process could potentially be impacted by successful completion of power purchase agreements with the grandfathered proposals, but is not expected to eliminate the RFP. HECO also continues to make progress toward installation of a 110 MW biofuel-fired simple-cycle combustion turbine generator in Campbell Industrial Park. The City and County of Honolulu has also issued a request for competitive sealed proposals to construct and operate an alternative energy facility and/or to improve and continue to operate the H-POWER facility. The City expects to award a contract(s) by January, 2008.

In parallel with these efforts, HECO will issue a SOI followed by an RFP⁶ seeking non-firm renewable energy, with a desired service date for the resource or resources totaling up to 100 MW in the 2010 to 2012 timeframe. The objectives to be accomplished through this two-step process include:

⁵ HECO has completed its assessment of each of these grandfathered proposals and has advised the project developers of the next steps. It is anticipated that proposals that are moving forward in parallel to the competitive bidding process will be targeting successful negotiations of a Purchase Power Agreement by September 2008.

⁶ The SOI is currently targeted by HECO for issuance by the end of September. The SOI will note that the anticipated Draft RFP to follow will be subject to approval by the Commission of this request to proceed.



- (1) Accelerate the addition of renewable energy resources on Oahu, while proceeding in a systematic manner that takes into account system constraints;
- (2) Support the timely acquisition of a significant increment of the best non-firm renewable energy resources the market can produce on Oahu;
- (3) Stimulate and expand the prospective bidder market by providing advance notice of the RFP issuance;
- (4) Provide adequate time for prospective bidders to assemble well-developed bids; and
- (5) Provide an opportunity for bidders to comment on the anticipated preliminary RFP scope and desired resource characteristics.

In addition to these initiatives, work continues on the analyses that have been identified in the integrated resource plan filings for HECO, HELCO and MECO to evaluate the impact of intermittent renewable energy resources (such as wind farms) on the Companies' systems, and renewable energy infrastructure projects identified as part of the Companies' proposed Renewable Energy Infrastructure Program in the RPS Framework Docket No. 2007-0008 that are intended to assist in the integration of more as-available and other non-dispatchable renewable projects onto the electrical grid than could otherwise be added without such projects.⁷ These efforts should then position HECO to effectively evaluate in its IRP process the potential for and the proper scope of a future RFP for additional renewable energy resources to meet RPS objectives.

Scope of the RFP

The 100 MW increment of non-firm renewable energy identified in HECO's IRP-3 Evaluation Report was targeted based on consideration of a number of factors, including (1) the expectation that up to 60 MW of non-firm renewable energy will be acquired on the HECO system through power purchase agreements with developers of proposed projects that are exempt from the Framework; (2) the infrastructure available to bring these resources on line in a timely manner (i.e., the amount of additional non-firm energy that can be accepted without significant, time-consuming transmission or sub-transmission system improvements); (3) operational and reliability issues associated with incorporating relatively large amounts of intermittent non-dispatchable generation into our system; (4) the need to prudently manage the acquisition of these non-firm intermittent resources in an incremental manner to gain critical operational

⁷ For example, many renewable projects, by their very nature, provide power on a variable basis, thus requiring offsetting firm generation as backup. Hawaii's island electric systems have difficulty accepting renewable generation during minimum load periods. Systems such as battery storage and pumped hydroelectric storage facilities allow a utility to accept and accommodate more as-available renewable energy.



experience and pending further system analyses, so as not to inadvertently foreclose future opportunities to add more renewable resources; and (5) the desire to follow a responsible and systematic approach toward meeting HECO's RPS.

Transmission and Sub-transmission Infrastructure Availability

With respect to consideration of available infrastructure, in order for this initial increment of non-firm renewable generation to be brought into our system in a timely manner, it would have to be done with minimal infrastructure improvements. Increments of generation that are too large will trigger a need for improvements to the existing transmission infrastructure which will undoubtedly result in extensive lead times for permitting and construction of new transmission lines. Designating this initial increment to be able to be supported within the existing infrastructure promotes a more timely acquisition process.

A high level review of the island of Oahu identifies two likely areas for potential generation sites. On the North Shore, a preliminary review of the existing radial 46kV circuits routed in the Waialua-Kahuku and Waialua-Kuilima region indicate that thermal limits may roughly support up to about 50 MW of generation each. The other potential area on Oahu for generation is in the Kahe and Campbell Industrial Park area. A preliminary review of the thermal limits of the circuits in this area shows that approximately 100 MW of additional generation may be supported. A more detailed technical assessment of these limitations would be done in the course of the proposal evaluation process as part of the Interconnection Requirements Study.

Operational Issues

With respect to consideration of operational issues, while HECO has gained experience with integrating non-firm renewable energy resources, in particular wind resources, at HELCO and MECO, HECO has learned that integrating wind generation onto a small isolated island grid presents many challenges in operating the system and maintaining system stability. Some of the challenges include:

- System stability – ensuring the system will not experience blackouts following line faults and generation loss with high wind penetration.
- Optimizing unit scheduling - requires accurate hour-ahead and day-ahead forecast, not presently available from wind farms and other intermittent resources.
- Frequency Control – variations in the output of intermittent resources can cause variations in system frequency. If frequency deviations become too large, the system is less stable and can lead to significant localized customer outages (under frequency load shed) or potentially extensive outages (if the deviation leads to system failure).
- System Management – standard Energy Management Systems (EMS) are not configured to work with high wind penetration. They must be “tuned” to account for the variable



output of wind farms and direct the rest of the system to respond to those fluctuations. If the EMS is not tuned properly it may worsen the fluctuations.

- Costs and emissions related to providing additional regulating reserve – providing the regulating reserve to account for the irregular nature of intermittent resources can require the commitment of additional regulating units and require the regulating units to operate at reduced fuel efficiency, which increases both costs and emissions for those units. Constant regulation to counter the intermittent variations also increases the wear and tear on the regulating units.

HECO is currently researching how other utilities with relatively small systems and a comparable generation resource mix are striving to deal with the operational challenges of increased wind penetration. However, the HECO utilities (HELCO and MECO) are presently among the front runners internationally in terms of the large penetration of wind energy already integrated on its grids. Thus, an available source of useful data from other systems is fairly limited, particularly from other small isolated electrical systems that are most directly comparable. Accordingly, HELCO was asked to present wind integration information at a Utility Wind Interest Group conference held in July, 2007, precisely because our actual operating experience with significant wind penetration is much greater than that of many of the utilities in other jurisdictions and offers unique insight to their grid operators and system planners and designers.

Managing the Acquisition of Non-firm Intermittent Renewable Resources

In addition to the general issues related to high levels of penetration of intermittent resources, Hawaii faces a unique set of challenges to integrating intermittent resources onto its grids. These include having no interconnections to other grids for support, little geographic diversity, and a unique mix of generation resources.

HECO, HELCO and MECO currently are collaborating with the Hawaii Natural Energy Institute and GE Energy on a Department of Energy funded project called the Hawaii Energy Roadmap. The primary objective of the project is to develop and execute an unbiased energy scenario analysis that addresses the future energy interests of the Big Island and initiates further study of a technology-specific project that serves as another step on a path toward meeting the island's energy objectives. This is an ambitious and technically challenging study that in some cases will require assumptions to fill in gaps where data or information is currently not available. Therefore, care will need to be taken in evaluating the results. It is hoped that these research and study efforts will help to better understand and quantify the effects of integrating intermittent resources onto the relatively small electrical grids in Hawaii and will help to chart a clearer course to achieve increased penetration of renewable resources into the HECO, MECO, and HELCO systems without sacrificing reliability or power quality.

To not foreclose the ability of the HECO system to take on more renewable energy later, relatively strict operating performance standards will be required from those non-firm renewable



energy resources presently being sought both through the ongoing IPP negotiations and the planned RFP. Analyses to determine the required attributes of the renewable energy resources and necessary standards of performance are in progress.

If done carefully and prudently, these significant initial increments of non-firm renewable energy acquired through ongoing IPP negotiations and the planned RFP is a major step in a larger progression to a much higher desired level of renewable energy penetration into HECO's system. One of the desired objectives of the IRP-4 will be to examine the acquisition of further renewable energy. Circumstances on the HELCO and MECO systems indicate that it is likely now difficult to readily integrate additional intermittent resources on their systems, primarily because the existing resources were not designed with the goal of ever-increasing penetration of intermittent resources. This is in contrast to the approach HECO is proposing to implement, where each increment of intermittent resources will be designed to meet specific performance requirements that create a solid foundation for future additions. Over the long-term, a carefully planned system will allow for higher penetration of intermittent resources.

Systematic Approach to RPS

By carefully planning and managing the additions of renewable energy into HECO's system, HECO is implementing a systematic process towards meeting its RPS. A diversified mix of resources making up HECO's renewable energy portfolio is the more appropriate approach to managing our RPS goals. HECO's current consolidated RPS is at 13.8% in 2006 and includes a well diversified portfolio of wind, geothermal, hydro, biofuel, solar, and energy efficiency programs, among many others.

Request for Waiver

The considerations noted above support the IRP-3 Evaluation Report's recommendation that an initial increment of approximately 100 MW of non-firm renewable energy be targeted for this requested RFP.

HECO respectfully requests Commission approval to proceed with a competitive bidding process for up to 100 MW of non-firm renewable energy targeted for the 2010-2012 timeframe as indicated in HECO's IRP-3 Evaluation Report for the reasons set forth above.

Sincerely,



cc: Division of Consumer Advocacy





September 24, 2007

William A. Bonnet
Vice President
Government & Community Affairs

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

PUBLIC UTILITIES
COMMISSION

2007 SEP 24 P 4:16

FILED

Dear Commissioners:

Subject: Docket No. 03-0372
Competitive Bidding for New Generation

Hawaiian Electric Company, Inc. ("HECO") respectfully submits for Commission approval the HECO-New Energy Opportunities, Inc. contract for the Independent Observer position for HECO's competitive bidding process to acquire up to approximately 100 MW of non-firm renewable energy for the island of Oahu, as identified in HECO's IRP-3 2007 Evaluation Report, filed May 31, 2007, in Docket No. 03-0253.¹ (See Attached.)

By letter dated May 9, 2007, HECO, Hawaii Electric Light Company, Inc. and Maui Electric Company, Limited (collectively, the "HECO Companies") submitted for Commission approval its list of qualified candidates for the Independent Observer position for future HECO Companies' competitive bidding processes to acquire a generation resource, or block of generating resources. The four candidates identified to be qualified for the Independent Observer position included: (1) Barry J. Sheingold, President, New Energy Opportunities, Inc., (2) Alan Kessler, Managing Director, Accion Group, Inc., (3) Matthew I. Kahal, Economic Consultant, Exeter Associates, Inc., and (4) Carl Freedman, Principal, Haiku Design & Analysis. By Decision and Order No. 23503, filed June 22, 2007, in the subject proceeding, the Commission approved the list of qualified candidates for the Independent Observer position.

The contract for the Independent Observer position is filed pursuant to §III.C.6 of the Framework for Competitive Bidding dated December 8, 2006 (the "Framework"), adopted by the Public Utilities Commission of the State of Hawaii (the "Commission") in D&O 23121. Section III.C.6 of the Framework requires, among other things, that: the electric utility's contract with the Independent Observer be acceptable to the Commission, and provide, among other matters, that the Independent: (a) report to the Commission and carry out such tasks as directed by the

¹ By letter dated September 24, 2007, in Docket Nos. 03-0253 and 03-0372, HECO submitted a request for Commission approval to proceed with a competitive bidding process to acquire up to approximately 100 MW of non-firm renewable energy for the island of Oahu.

Commission, including the tasks described in this Framework; (b) cannot be terminated and payment cannot be withheld without the consent of the Commission; and (c) can be terminated by the Commission without the utility's consent, if the Commission deems it to be in the public interest in the furtherance of the objectives of this Framework to do so.

HECO does not plan to participate as a bidder in this RFP for non-firm energy resources. Nonetheless, HECO still intends to retain the services of an Independent Observer to provide valuable advice and guidance on the competitive bidding processes that are utilized, including HECO's treatment of all bidders the same in terms of access to information, time of receipt of information, and response to questions.²

Sincerely,



Attachment

cc: Division of Consumer Advocacy

²

Section IV.H.2. of the Framework.



WORK AUTHORIZATION NO. PXA-07-004-01-01-01
WORK ORDER NO. HP002583

**COMPETITIVE BIDDING INDEPENDENT OBSERVER SERVICES
AGREEMENT**

This COMPETITIVE BIDDING INDEPENDENT OBSERVER SERVICES AGREEMENT (hereinafter "Agreement" or "Contract") is made on August 1, 2007, by and between HAWAIIAN ELECTRIC COMPANY, INC. (hereinafter "Company"), a Hawaii corporation, whose principal place of business and address is 900 Richards Street, Honolulu, Hawaii 96813 and whose mailing address is P. O. Box 2750, Honolulu, Hawaii 96840-0001 and New Energy Opportunities, Inc. (hereinafter "Consultant"), a Massachusetts corporation whose principal place of business and mailing address is 125 Powers Road, Sudbury, Massachusetts 01776, doing business in Hawaii.

W I T N E S S E T H:

WHEREAS, Company is in the business of generation, transmission, and distribution of electrical power on the Island of Oahu, State of Hawaii; and

WHEREAS, Company requires certain professional services to be accomplished in connection with competitive bidding relating to its integrated resources and generation planning; and

WHEREAS, Consultant is in the business of performing the professional services needed by Company; and

WHEREAS, Consultant represents that it and its subcontractors are equipped and have the expertise necessary to perform the particular professional services required under this Agreement,

NOW, THEREFORE, in consideration of these premises and of the mutual promises herein contained, Company and Consultant hereby agree that Consultant will perform professional services work for Company under the following terms and conditions:

I. SCOPE OF WORK

1.1 Project Description - Consultant agrees to furnish all labor, tools, materials, equipment, meals, lodging, transportation, and supervision necessary to complete the following work in a professional and diligent manner, and as more specifically described in Attachment A: Provide services as an independent observer to monitor, advise and report on the Company's 100 MW Non-Firm Renewable Energy Competitive Bidding Project (the "Project") in accordance with the Hawaii Public Utilities Commission's (the "Commission") *Framework for Competitive Bidding*, dated December 8, 2006 ("Framework"). Such services for the Project are hereinafter referred to as the "Work." Without limiting the foregoing, the Work shall include reporting to the Commission and carrying out such tasks as directed by the Commission, including the tasks described in the Framework. Any special terms and conditions set forth in Attachment A shall take precedence over any conflicting provisions found in this Contract.

1.2 Term - The Term of this Contract shall be from October 1, 2007 until the competitive bidding process for the Project is completed, which is currently estimated to be in December 2009.

II. COMPENSATION

2.1 Time and Expenses – Consultant shall be entitled to compensation for Work performed and expenses incurred under this Contract on a time and expenses basis. The hourly rates and types of expenses which Consultant may invoice to Company under this Contract are stated in Attachment B. Except as set forth in Attachment B, no other rates or expenses may be charged by Consultant unless agreed to by the parties in an amendment hereto. The Parties recognize that it is extremely difficult to estimate the total cost of services to be provided under this Contract due to the variables associated with the work to be performed, including, but not limited to, the difficulty or contentiousness involving issues associated with the development of a Request for Proposals (RFP) and associated standard form power purchase agreement (PPA), bid evaluation and selection, PPA negotiation and regulatory approvals. The Parties agree that a reasonable mid-range estimate of the total fees and expenses to be paid for Work to be performed by Consultant under this Contract is Two Hundred Forty Thousand Dollars (\$240,000) ("Estimated Total Amount"), which consists of the following sub-categories of the Work: Phase 1 – RFP Development (2007-2008) = \$95,000; Phase 2 – Bid Evaluation (2008-2009) = \$95,000 and Phase 3 – Contract Negotiation (2009) = \$50,000. In the event that Consultant projects that the total cost of the Work will be in excess of the Estimated Total Amount or the cost of any phase of the Work described above will exceed the estimated cost for such phase, then Consultant shall prepare in writing an explanation of the services provided to date and the associated cost, the expected services to be provided in the future under the Contract and the estimated cost thereof, and a request for an increase in the budget for Work in excess of the Estimated Total Amount if anticipated to be necessary. Approval of such request shall not be unreasonably withheld by Company, to the extent that the requested increase (or increases) to the Estimated Total Amount (a) is not due to Consultant's failure to perform the Work in accordance with the Contract in a diligent and reasonably efficient and effective manner and (b) is a reasonable estimate of the cost of services for remaining work to be performed under the Contract with a reasonable contingency. Approval of any increase in the Estimated Total Amount for the Work shall be documented in writing by the Company's Designated Representative and be subject to approval by the Commission.

2.2 Invoicing – Within 15 days after completion of each month's Work, Consultant will submit its invoice for all Work rendered and all allowable expenditures incurred during that month. Such invoice shall be in a form approved by Company and shall at a minimum show the total hours of Work for that month by each Consultant employee or subcontractor, the hourly rate for each employee or subcontractor, a written explanation of the work performed, and an itemized list of all allowable expenditures made during the month. Consultant shall provide supporting documentation, including but not limited to invoices and receipts, as evidence of such expenditures. The invoice shall reference the Company's Designated Representative, the Company purchase order or Service Contract number, if any, and any additional information required as part of the Scope of Work hereunder. All invoices should be addressed as follows:

Barry Nakamoto
Director, Generation Bidding
Hawaiian Electric Company, Inc.
P. O. Box 2750
Honolulu, Hawaii 96840-0001

The ORIGINAL invoice with ALL REQUIRED SUPPORTING DOCUMENTATION must be sent to the Company's Designated Representative as indicated above. Failure to follow this procedure may cause a delay in payment.

2.3 Payments - Payment of a properly submitted monthly invoice shall be made within thirty (30) days after receipt by Company.

2.4 Withholding of Payments; Set-off - Company may withhold from any payment: (1) any portion of the invoiced amount that is incorrectly invoiced, or (2) any portion of the invoiced amount that is disputed in good faith by Company; provided that the Company states the basis in writing for such withholding and the COMMISSION consents to any such withholding. Company shall promptly pay the undisputed amount of the invoice or the amount of the invoice that is correctly invoiced.

III. STATUS OF THE PARTIES

3.1 Independent Contractor - Consultant will act solely as an independent contractor of Company, and not as Company's agent or servant for any purpose. All employees of Consultant will work under the supervision of Consultant and not act as Company's agents or servants for any purpose.

3.2 Subletting or Assigning Contract - Consultant shall not assign any portion of the Contract or any rights or obligations under this Contract without the prior written consent of Company, and of the Commission, if required. Company acknowledges that Consultant has the right to engage the subcontractors identified in Attachment B to assist Company in the performance of the Work, and Company approves Consultant's engagement of such subcontractors. In addition, Consultant may retain additional subcontractors that satisfy the requirements set forth in Attachment B with the written consent of Company. In any event, Company reserves the right to remove any Consultant employee or subcontractor in accordance with Section 5.3 of this contract.

IV. POINTS OF CONTACT

4.1 Company's Designated Representative - As used in this Contract, "Company's Designated Representative" shall be Barry Nakamoto, HECO's Director of Generation Bidding. Company's Designated Representative shall be the point of contact for and have the authority to speak on behalf of Company concerning all matters related to this Contract, except that he shall not have the authority to amend the Contract.

4.2 Consultant's Designated Representative - As used in this Contract, "Consultant's Designated Representative" shall be Barry J. Sheingold, President of Consultant. During the performance of the Work hereunder, he can be reached at the Consultant offices in Sudbury, Massachusetts. He shall be the point of contact for and have the authority to speak on behalf of Consultant concerning all matters related to this Contract.

V. PERFORMANCE STANDARDS AND WARRANTY

5.1 Performance Standards - In selecting employees to undertake the Work under this Contract, Consultant shall select only those persons who are qualified by the necessary education, training and experience to provide diligent and professional performance of the particular Work for which each such employee is responsible. Consultant shall perform all Work in a professional and diligent manner. Consultant's personnel shall exercise that degree of skill and care consistent with the accepted professional standards in Consultant's field, and shall indemnify and hold Company harmless from any loss, including but not limited to reasonable attorneys' fees and costs, incurred by Company as a result of the negligent professional acts, errors or omissions of Consultant or any of Consultant's personnel; provided, that neither Consultant nor Company shall be liable to the other for any special indirect, consequential, or incidental damages.

5.2 Warranty - Correction of Defective or Substandard Work - Consultant acknowledges its responsibility for insuring that the procedures used in the performance of this Contract are sufficient to satisfactorily accomplish the Work. Consultant warrants that it shall promptly correct without expense to Company all Work which is not completed to the reasonable satisfaction of Company or COMMISSION or which does not meet the performance standards established herein. Consultant shall make such corrections of defective work upon Company's written notice thereof anytime during the term of this Contract and up to 180 days after the Commission's final Decision and Order on Company's application for approval of the contract resulting from the Project ("Warranty Period").

5.3 Right to Reject - Due to the critical nature of Company's operations, Consultant agrees that if Company, with the consent of the Commission, and after reasonable consultation with Consultant, determines that any Consultant employee or subcontractor provided under this Contract shall be unsuitable for the performance of the Work, or that the continued presence of such employee or subcontractor on Company

property is not consistent with the best interests of Company, then in such an instance Company may request that Consultant remove such employee or subcontractor from the Work and Consultant shall forthwith comply with this request. Consultant will then promptly replace such employee or subcontractor with an employee or subcontractor who fully meets the standards under this Contract and will do so at no cost to Company.

VI. INSURANCE AND INDEMNITY

6.1 Workers' Compensation - Consultant and anyone acting under its direction or control or on its behalf shall at its own expense procure and maintain in full force at all times during the term of this Contract, Workers' Compensation and other similar insurance required by state or federal laws. In the event that Consultant fails to maintain such insurance as required by law, Consultant acknowledges and agrees that it will not seek or be entitled to any coverage under Owner's insurance. Permissible self-insurance will be acceptable subject to submission of a copy of appropriate governmental authorization and qualification by Consultant.

6.2 Commercial General Liability Insurance - Consultant and anyone acting under its direction or control or on its behalf shall at its own expense procure and maintain in full force at all times during the term of this Contract, Commercial General Liability insurance with a bodily injury and property damage combined single limit of liability of at least ONE MILLION DOLLARS (\$1,000,000) for any occurrence.

6.3 Automobile Liability Insurance - Consultant and anyone acting under its direction or control or on its behalf shall at its own expense procure and maintain in full effect at all times during the term of this Contract, Automobile Liability insurance with a bodily injury and property damage combined single limit of at least ONE MILLION DOLLARS (\$1,000,000) per accident.

6.4 Waiver of Subrogation - Consultant and anyone acting under its direction will cause its insurers (except for Workers' Compensation insurance) to waive all rights of subrogation which Consultant or its insurers may have against Company, Company's agents, or Company's employees.

6.5 Company as Additional Insured - Insurance policies (except Workers' Compensation and Automobile Liability) providing the insurance coverage required in this Article will name Company, Company's agents, and/or Company's employees as an additional insured, as appropriate. Coverage must be primary in respect to the additional insured. Any other insurance carried by the Company will be excess only and not contribute with this insurance.

6.6 Certificates of Insurance - Within ten (10) days of the date of this Contract, Consultant shall file with the Company's Designated Representative certificates of insurance certifying that each of the foregoing insurance coverages is in force, and further providing that the Company will be given thirty (30) days' written notice of any material change in, cancellation of, or intent not to renew any of the policies. Receipt of

any certificate showing less coverage than requested is not a waiver of the Consultant's obligation to fulfill the requirements.

6.7 Indemnity - Consultant and anyone acting under its direction or control or on its behalf shall indemnify, defend and hold harmless Company from and against all losses, damages, claims and actions, and all expenses incidental to such losses, damages, claims or actions, including but not limited to reasonable attorneys' fees and costs, based upon or arising out of damage to property or injuries to persons, or other tortious acts to the extent negligently or tortiously caused or contributed to by Consultant or anyone acting under its direction or control or in its behalf in the course of its performance under this Contract; provided Consultant's aforesaid indemnity and hold harmless obligation shall not be applicable to any liability to the extent based upon the negligence or tortuous conduct of Company.

VII. CONFIDENTIALITY AND NON-DISCLOSURE

7.1 Confidentiality and Non-Disclosure. During the course of the Work, Company may disclose to Consultant (a) confidential Company business or other proprietary information, and (b) confidential proposals submitted to Company and information relating thereto from bidders (collectively, "Confidential Information"). Subject to Consultant's obligations under the Framework, which obligations shall prevail over any actual or perceived limitations contained in this section, the following shall apply to Consultant's receipt of Confidential Information.

Consultant will hold in confidence and, without Company's consent, will not use, reproduce, distribute, transmit, or disclose, directly or indirectly, the Confidential Information except as permitted herein. Consultant may only disclose the Confidential Information to its officers, directors, employees, professional advisors and independent contractors and consultants with a need to know the information for the implementation or exercise of rights and/or performance of obligations under or arising from this Agreement, provided that such professional advisors and independent contractors and consultants are bound by written confidentiality agreements with terms and conditions that are no less restrictive than those contained in this section. Without limiting the foregoing, Consultant agrees that it will exercise at least the same standard of care in protecting the confidentiality of the Confidential Information as it does with its own confidential information of a similar nature, but in any event, no less than reasonable care.

Confidential Information for purposes of this Agreement shall not include information if and only to the extent that the information: (i) is or becomes a part of the public domain through no act or omission of the Consultant; (ii) was in the Consultant's lawful possession prior to the disclosure and had not been obtained by the Consultant either directly or indirectly from Company; or (iii) is lawfully disclosed to Consultant by a third party without restriction on disclosure. Confidential Information may also be

disclosed by Consultant pursuant to a requirement the Commission or other governmental agency, regulatory body or by operation of law, provided that Consultant shall disclose only that part of the Confidential Information that it is required to disclose and, with respect to subpoenas or other legal process, shall notify Company prior to such disclosure in a timely fashion in order to permit Company to lawfully attempt to prevent or restrict such disclosure should it so elect, and shall take all other reasonable and lawful measures to ensure the continued confidential treatment of the same by the party to which the Confidential Information is disclosed.

Notwithstanding the foregoing, this section shall not prohibit Consultant from disclosing Confidential Information to the Commission (or others as directed by the Commission) to the extent necessary to comply with Consultant's obligations under the Framework and the Scope of Work hereunder.

VIII. TERMINATION FOR CAUSE

8.1 Conditions Allowing Termination - The Commission's approval is necessary before Company may terminate this Contract. Further, Consultant acknowledges and agrees that the Commission may terminate this Contract, with or without Company's consent, on behalf of the Company for cause on any grounds set forth in this Section 8.1. The Company (or the Commission) may terminate this Contract for cause if:

- (1) Consultant fails or is unable to perform its obligations under this Contract;
- (2) Consultant is in material breach of its obligations under this Contract;
- (3) Consultant makes a general assignment for the benefit of its creditors;
- (4) Consultant has a receiver appointed because of insolvency; or
- (5) Consultant files bankruptcy or has a petition for involuntary bankruptcy filed against it.

8.2 Notice Required Before Termination - Before seeking to terminate this Contract for cause, Company (or the Commission) shall give written notice to Consultant of the existence of grounds ("default") allowing termination for cause under Section 8.1 herein and of Company's (or the Commission's) intention to seek termination if the default is not cured to the reasonable satisfaction of Company within fifteen (15) days of such notice or such longer period of time as shall be stated in the notice. Consultant shall have the right to cure the default during the stated time period.

8.3 Company's Rights Upon Termination - If Consultant fails to cure the default within fifteen (15) days or such longer time as has been specified, Company may terminate this Agreement with the consent of the Commission and secure such substitute services as necessary and appropriate to complete the Work. In the event Company acquires substitute services under this provision, Consultant agrees to pay Company upon demand the difference between what the substitute services actually costs Company and what Consultant would have been paid had it completed the Work itself, provided that Company shall take all reasonable efforts to mitigate any damages resulting from the actions of or termination of Consultant. This provision shall survive termination of this Agreement for a period of two years.

IX. TERMINATION FOR CONVENIENCE

9.1 Company's Rights - Notwithstanding Article VIII above, Company, with the consent of the Commission, and the Commission shall have the right to terminate this Contract for convenience at any time by giving written notice of such to Consultant. Upon receiving notice of termination, Consultant shall discontinue the Work on the date specified in the notice.

9.2 Commission's Rights - The Commission may terminate this Contract for convenience, with or without Company's consent, on behalf of the Company if the Commission deems it to be in the public interest in the furtherance of the objectives of the Framework. Upon receiving notice of termination from the Commission, Consultant shall discontinue the Work on the date specified in the notice.

9.3 Termination Prior to Commencement of Work - If this Contract is terminated prior to Consultant's having commenced any Work or preparation for Work, no payment shall be made to Consultant.

9.4 Termination After Commencement of Work - If this Contract is terminated for Company's or the Commission's convenience after Consultant has commenced any Work, Consultant will be compensated for costs properly incurred and for labor at the rates specified in the Contract for Work actually performed prior to the notice of termination and for any Work performed thereafter if necessary to finish a portion or portions of Work in progress at the time of termination, to the extent approved by Company.

9.5 Consultant's Duty to Mitigate - Consultant agrees that it has an affirmative duty to mitigate all costs upon notice of termination of this Contract for convenience of Company or the Commission.

X. FORCE MAJEURE

10.1 Excuse of Performance - Notwithstanding anything in this Contract to the contrary, neither party shall be liable nor responsible for failure to carry out any of its obligations under this Contract caused by Force Majeure. A party rendered unable to fulfill any obligation under this Contract by reason of Force Majeure shall make reasonable efforts to remove such inability in the shortest possible time, and the other party shall be excused from performance of its obligations until the party relying on Force Majeure shall again be in full compliance with its obligations under this Contract.

10.2 Definition - The term "Force Majeure" as used herein shall mean any cause beyond the control of the party affected, and which by reasonable efforts the party affected is unable to overcome, including without limitation the following: acts of God; fire, flood, landslide, lightning, earthquake, hurricane, tornado, storm, freeze, volcanic eruption or drought; blight, famine, epidemic or quarantine; act or failure to act of the other party; theft; casualty; war; invasion; civil disturbance; explosion; acts of public enemies; or sabotage.

XI. LAWS, REGULATIONS AND PUBLIC ORDINANCES

11.1 Compliance - Consultant shall comply with applicable federal, state, and local statutes, regulations and public ordinances of any nature governing the Work, including without limitation, those statutes specifically referred to in this Article. Consultant shall indemnify and defend Company from any liability, fines, damages, costs, or expenses arising from Consultant's failure to comply with this Article.

11.2 Taxes - Consultant assumes exclusive liability for all contributions, taxes or payments required to be made because of persons hired, employed or paid by Consultant by the federal and state Unemployment Compensation Act, Social Security Acts and all amendments, and by all other current or future acts, federal or state, requiring payment by the Consultant on account of the person hired, employed, or paid by Consultant for Work performed under this Contract. Sales, use and excise taxes applicable to the value or use of any property incorporated, furnished, or otherwise supplied by Consultant shall be stated separately from the price or rates specified in Article II (COMPENSATION), and shall not be included in any computation of profit allowed by this Contract. Consultant assumes exclusive liability for all such taxes charged or chargeable upon any such goods or materials supplied by Consultant pursuant to this Contract.

11.3 Safety and Health Regulations - Consultant shall comply with all applicable federal, state and local laws and regulations pertaining to health, safety, sanitary facilities, and waste disposal. Consultant shall meet all applicable requirements of the Occupational Safety and Health Act of 1970 (OSHA) including all applicable amendments. Consultant shall also comply with any applicable standards, rules, regulations and orders promulgated under OSHA and particularly with the agreement for

State development and enforcement of Occupational Health and Safety Standards as authorized by Section 18 of the Act to the extent applicable.

11.4 Equal Employment Opportunity - (Applicable to all contracts of \$10,000 or more in the whole or aggregate. 41 CFR 60-1.4 and 41 CFR 60-741.5.) Consultant is aware of and is fully informed of Consultant responsibilities under Executive Order 11246 (reference to which include amendments and orders superseding in whole or in part), if applicable, and shall be bound by and agrees to the provisions as contained in Section 202 of said Executive Order and the Equal Opportunity Clause as set forth in 41 CFR 60-1.4 and 41 CFR 60-741.5(a), which clauses are hereby incorporated by reference, to the extent applicable.

11.5 Employment of Disabled Veterans and Veterans of the Vietnam Era - (Applicable to all contracts of \$10,000 or more in the whole or aggregate. 41 CFR 60-250.4 and 41 CFR 60-741.5.) Consultant agrees that it is and will remain in compliance with the applicable rules and regulations promulgated under The Vietnam Era Veterans Readjustment Assistance Act of 1974, The Affirmative Action Clause set forth in 41 CFR 60-250.4, the Rehabilitation Act of 1973 and the Equal Opportunity Clause set forth in 41 CFR 60-741.5, which clauses are incorporated by reference herein.

11.6 Notice of Employee Rights Concerning Payment of Union Dues or Fees - (Applicable to all contracts exceeding \$100,000) Consultant agrees that it shall comply with Executive Order 13201 and 29 CFR Part 470 regarding notice of employee rights concerning payment of union dues or fees, which are incorporated by reference herein, if applicable.

XII. MISCELLANEOUS

12.1 Patents and Copyrights - Consultant agrees that in performing Work under this Contract, it will not use any process, program, design, device, or material which infringes on any United States patent or copyright or any trade secret agreement. Consultant agrees to indemnify, defend and hold harmless Company from and against all losses, damages, claims, fees and costs, including but not limited to reasonable attorneys' fees and costs, arising from or incidental to any suit or proceeding brought against Company for patent, copyright or trade secret infringement arising out of Consultant's Work. Company shall promptly notify Consultant of any such suit or proceeding and shall assist Consultant in defending the action by providing any necessary information.

12.2 Security and Company Rules - When on Company premises or carrying out Consultant's duties for Company, Consultant personnel shall comply with all applicable provisions of Company's Corporate Code of Conduct, Competitive Bidding Code of Conduct, Company's security regulations, information resource policies and all other applicable Company policies and practices that Company personnel and consultants are now or during the Work are asked to follow; provided, that Consultant has been provided actual notice of such practices and procedures and as long as compliance is not inconsistent with Consultant's obligations under the Framework. Consultant shall advise

its employees of these practices and procedures and secure their consent to abide by these procedures. Unless otherwise agreed to by the parties, Consultant's personnel shall observe the working hours of Company while working on Company's premises. Consultant agrees to cooperate fully and to provide any assistance necessary to Company in investigation of any security breaches which may involve Consultant or Consultant's employees or subcontractors.

12.3 Amendments - This Contract may be amended or supplemented by and only by written instrument duly executed by each of the parties.

12.4 Severability of Provisions - In the event a court or other tribunal of competent jurisdiction at any time holds that any provision of this Contract is invalid, the remainder of this Contract shall not be affected thereby and shall continue in full force and effect.

12.5 Entire Contract - This Contract shall constitute the entire understanding between the parties, superseding any and all previous understandings, oral or written, pertaining to the subject matter contained herein. The parties have entered into this Contract in reliance upon the representations and mutual undertakings contained herein and not in reliance upon any oral or written representation or information provided to one party by any representative of the other party. Neither party shall claim at any time that it entered into this Contract in whole or in part based on any representation not stated in this Contract.

12.6 Applicable Law/Forum - This Contract is made under and shall be governed by and construed in accordance with the laws of the State of Hawaii. Each party agrees and consents that any dispute arising out of this Contract, however defined, shall be brought in the State of Hawaii in a court of competent jurisdiction.

12.7 No Waiver - The failure at any time of either party to enforce any of the provisions of this Contract, or to require at any time performance by the other party of any of the provisions hereof, shall in no way be construed to be a waiver of such provisions, nor in any way construed to affect the validity of this Contract or any part hereof, or the right of any party thereafter to enforce each and every such provision.

12.8 Access to Records - Upon request, Consultant shall make available for inspection and audit by Company in Honolulu, Hawaii any and all records and/or documents relating to Work performed under this Contract during the performance of the Work and for a period of up to two (2) years from the completion of all Work under this Contract.

12.9 Regulatory Approvals - This Contract shall be contingent upon any and all required governmental and regulatory approvals, including those of the Commission.

12.10 Gender and Number - The terms "Company" and "Consultant," as and when used herein, or any pronouns used in place thereof, shall mean and include the masculine, feminine and neuter, the singular or plural number, individuals, partnerships,

trustees or corporations and their and each of their respective successors, heirs, personal representatives, successors in trust and assigns, according to the context thereof. All covenants and obligations undertaken by two or more persons shall be deemed to be joint and several unless a contrary intention is clearly expressed elsewhere herein.

12.11 Attorneys' Fees and Costs - If there is a dispute between the parties and either party institutes a lawsuit, arbitration, mediation, or other proceeding to enforce, declare, or interpret the terms of this Agreement, the prevailing party shall be awarded its reasonable attorneys' fees and costs.

12.12 Survival of Obligations - All defense, hold harmless and indemnity obligations hereunder shall survive termination of this Contract for a period of two years from the termination of this Agreement. All confidentiality obligations hereunder shall survive termination of this Contract for a period of five (5) years from (a) December 31, 2009 or (b) the last time Work is performed under this Contract, whichever is later, provided that, at the Company's written request, at or before the expiration of Consultant's confidentiality obligations hereunder, Consultant shall return to Company all copies of Confidential Information in tangible form received from Company or its agents or certify in writing within such period that Consultant has destroyed all such information.

XIII. COUNTERPARTS CLAUSE

The parties agree that this Agreement may be executed in counterparts, each of which shall be deemed an original, and all of which shall together constitute one and the same instrument binding all parties notwithstanding that all of the parties are not signatories to the same counterparts. For all purposes, duplicate unexecuted and unacknowledged pages of the counterparts may be discarded and the remaining pages assembled as one document.

IN WITNESS WHEREOF, the parties hereto have caused this Contract to be signed by appropriate representatives of each as of the date indicated.

HAWAIIAN ELECTRIC COMPANY, INC.
("Company")

By _____

Its _____

Date: _____

By _____

Its _____

Date: _____

NEW ENERGY OPPORTUNITIES, INC.
("Consultant")

By Bain J. Theng

Its President

Date: September 19, 2007

HAWAIIAN ELECTRIC COMPANY, INC.
("Company")

deliberate

By Thomas C. Ommers

Its Vice President

Date: 9/21/07

By _____

Its _____

Date: _____

NEW ENERGY OPPORTUNITIES, INC.
("Consultant")

By _____

Its _____

Date: _____

ATTACHMENT A
(Scope of Work)

Independent Observer for HECO 100 MW Non-Firm Renewable
Energy Competitive Bidding Project
Scope of Work

Project Description: See Exhibit 1 hereto (excerpt from the HECO IRP-3 Evaluation Report provided in Docket No. 03-0253). A copy of the complete Evaluation Report shall be provided to Consultant separately.

In accordance with the Commission's decision the Competitive Bidding Docket,¹ an Independent Observer is required whenever the utility or its affiliate seeks to advance a project proposal in response to a need that is addressed by its Request for Proposals (RFP), or when the PUC determines otherwise. While there will not be a Company Self-Build proposal submitted with respect Company's 100 MW Non-Firm Capacity Competitive Bidding Project (the "Project"), Company will still utilize the services of an Independent Observer to provide guidance and recommendations on the competitive bidding process employed in accordance with the Commissions Competitive Bidding Framework (copy attached as Exhibit 2), hereafter referred to as the "Framework."

Consultant shall perform all tasks required of an Independent Observer under the Framework (Consultant shall assume an Independent Observer is required for this Project), including those specified in pages 13 through 16 of the Framework, and all other tasks required by the Commission or Company with respect to the Project pursuant to the Framework.

¹ Docket No. 03-0373, Decision & Order No. 23121 dated December 8, 2006.

EXHBIT 1

Excerpt from Docket No. 03-0253 HECO IRP-3 Evaluation Report (pages 18-20)

4.2.5 Non-Firm Renewable (100 MW)

HECO is in various stages of negotiation with several IPP developers for purchase of renewable energy. It is HECO's intent to continue discussions with these "grandfathered" developers² to seriously examine the viability of these projects and to establish a reasonable schedule for bringing these discussions to conclusion. In parallel with this effort, HECO is targeting issuance of a Solicitation of Interest ("SOI") on or about September, 2007, announcing HECO's intent to proceed with an RFP for approximately 100 MW of non-firm renewable energy. The anticipated RFP to follow is targeted for issuance on or about year-end 2007³, with a desired service date for the resource or resources totaling up to 100 MW in the 2010 to 2012 timeframe. HECO plans to submit to the Commission by separate filing a request for approval to proceed with the competitive procurement process outlined here.

The objectives to be accomplished by issuing the SOI include:

- Support the timely acquisition of a significant increment of the best as-available renewable energy resources the market can produce on Oahu;
- Stimulation and expansion of the prospective bidder market by providing advance notice of the RFP issuance;
- Adequate time for prospective bidders to assemble well-developed bids; and
- An opportunity for bidders to comment on the anticipated preliminary RFP scope and desired resource characteristics

The SOI is anticipated to include at least the following information:

- Preliminary scope of the planned RFP;

² HECO is continuing discussions with these developers pursuant to exemptions from the Competitive Bidding Framework for certain offers to sell energy or capacity by non-fossil fuel producers submitted before adoption of the Competitive Bidding Framework.

³ Issuance of an RFP by year-end 2007 that is consistent with all of the requirements of the Competitive Bidding Framework, including a Commission approved code of conduct applicable to bids by the utility or its affiliate, is ambitious. To simplify and expedite the proposed RFP process, it is anticipated that no utility or affiliate bid will be submitted for this non-firm renewable resource RFP.

- Anticipated characteristics of the resources desired;
- Information on transmission constraints associated with likely areas of resource interconnection; and
- Anticipated competitive solicitation process summary, milestones and schedule.

The SOI will also inform prospective bidders that HECO is in direct negotiation with several IPP developers, and that there is a potential that the planned RFP may not be issued if the outcome of ongoing discussions with those developers is likely to result in agreements to purchase significant amounts non-firm renewable energy. Thus the actual amount of additional as-available renewable energy that could result from the anticipated RFP may depend on the commitments derived from the current ongoing negotiations with IPP developers and other operational or economic constraints. HECO will be requesting a waiver from competitive bidding framework requirement of an approved IRP to proceed with issuing this SOI and subsequent RFP for this block of renewable energy. HECO's request for the waiver will be filed with the Commission separately.

In scoping the desired resource attributes and performance standards sought in the planned RFP for a 100 MW block non-firm renewable energy, HECO recognizes that the acquisition of a second block of renewable energy is likely to be a desired objective of the HECO IRP-4 planning process presently underway. To not foreclose the ability of the HECO system to take on more renewable energy later, relatively strict operating performance standards will be required from those non-firm renewable energy resources presently being sought both through the ongoing IPP negotiations and the planned RFP. Studies to determine the required attributes of the renewable energy resources and necessary standards of performance are in progress. These analyses are also critical to the HECO IRP-4 process in evaluating the potential to integrate and properly scope a second block of renewable energy resources for the electric grid on Oahu.

While HECO has gained experience with integrating non-firm renewable energy resources, in particular wind resources, at HELCO and MECO, HECO has learned that integrating wind generation onto a small isolated island grid presents many challenges in operating the system and maintaining system stability. Some of the challenges include:

- System stability – ensuring the system will not experience blackouts following line faults and generation loss with high wind penetration
- Optimizing unit scheduling - requires accurate hour-ahead and day-ahead forecast, not presently available from wind farms and other intermittent resources.
- Frequency Control – variations in the output of intermittent resources can cause variations in system frequency. If frequency deviations become too large, the system is less stable and can lead to short customer outages (under frequency load shed) or extensive outages (if the deviation leads to system failure)
- System Management – standard Energy Management Systems (EMS) are not configured to work with high wind penetration. They must be “tuned” to account for the variable output of wind farms and direct the rest of the system to respond to those fluctuations. If the EMS is not tuned properly it could worsen the fluctuations.
- Cost and emissions related to provide additional regulating reserve - providing the regulating reserve to account for the irregular nature of intermittent resources can require regulating units to operate at reduced fuel efficiency which increases both costs and emissions for those units. Constant regulation to counter the intermittent variations also increases the wear and tear on the regulating units.

HECO is currently researching how other utilities with relatively small systems deal with high wind penetration. Addressing some of the challenges that as-available resources present will allow HECO to maximize the amount of as-available renewable resources that can be integrated into its system and still maintain reliable operation.

EXHIBIT 2 – Competitive Bidding Framework

EXHIBIT A

FRAMEWORK FOR COMPETITIVE BIDDING
December 8, 2006

STATE OF HAWAII
PUBLIC UTILITIES COMMISSION

Exhibit A

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STATE OF HAWAII
PUBLIC UTILITIES COMMISSION

FRAMEWORK FOR COMPETITIVE BIDDING
December 8, 2006

I. DEFINITIONS

As used in this Framework, unless the context clearly requires otherwise:

"Approved IRP" means an electric utility's IRP that has been approved by the Commission in the utility's IRP proceeding. As of the effective date of this Framework, the status of each utility's IRP is as follows: (1) on October 28, 2005, Hawaiian Electric Company, Inc. filed its 3rd IRP in In re Hawaiian Elec. Co., Inc., Docket No. 03-0253; (2) Maui Electric Company, Ltd. is scheduled to file its 3rd IRP by April 30, 2007, in In re Maui Elec. Co., Ltd., Docket No. 04-0077; (3) Hawaii Electric Light Company, Inc. is scheduled to file its 3rd IRP by December 29, 2006, in In re Hawaii Elec. Light Co., Inc., Docket No. 04-0046; and (4) on June 20, 2006, the Commission opened a proceeding for Kauai Island Utility Cooperative's 3rd IRP in In re Kauai Island Util. Coop., Docket No. 2006-0165.

"CIP Approval Requirements" means the procedure set forth in the Commission's General Order No. 7, Standards for Electricity Utility Service in the State of Hawaii, Paragraph 2.3(g), as modified by In re Kauai Island Util. Coop., Docket No. 03-0256, Decision and Order No. 21001, filed on May 27, 2004, and In re Hawaiian Elec. Co., Inc., Hawaii Elec. Light Co., Inc., and Maui Elec. Co., Ltd., Docket No. 03-0257, Decision and Order No. 21002, filed on May 27, 2004. "In general, [the] commission's analysis of capital expenditure applications involves a review of whether the project and its costs are reasonable and consistent with the public interest, among other factors. If the commission approves the [electric] utility's application, the commission in effect authorizes the utility to commit funds for the project, subject to the proviso that 'no part of the project may be included in the utility's rate base unless and until the project is in fact installed, and is used and useful for public utility purposes.'" Decision and Order No. 21001, at 12; and Decision and Order No. 21002, at 12.

"Code of Conduct" means a written code developed by the host electric utility and approved by the Commission to ensure the fairness and integrity of the competitive bidding process, in particular where the host utility or its affiliate seeks to advance its own resource proposal in response to an RFP. The "Code of Conduct" is more fully described in Part IV.H.9.c of the Framework.

"Commission" means the Public Utilities Commission of the State of Hawaii.

"Competitive bid" or "competitive bidding" means the mechanism established by this Framework for acquiring a future energy generation resource or a block of generation resources by an electric utility.

"Consumer Advocate" means the Division of Consumer Advocacy of the Department of Commerce and Consumer Affairs, State of Hawaii.

"Contingency Plan" means an electric utility's plan to provide either temporary or permanent generation or load reduction programs to address a near-term need for capacity as a result of an actual or expected failure of an RFP process to produce a viable project proposal, or of a project selected in an RFP. The utility's Contingency Plan may be different from the utility's Parallel Plan and the utility's bid. The term "utility's bid," as used herein, refers to a utility's proposal advanced in response to a need that is addressed by its RFP.

"Electric utility" or "utility" means a provider of electric utility service that is regulated by and subject to the Commission's jurisdiction pursuant to Chapter 269, Hawaii Revised Statutes.

"Framework" means the Framework for Competitive Bidding dated December 8, 2006, adopted by the Commission in Docket No. 03-0372.

"Independent Observer" means the neutral person or entity retained by the electric utility to monitor the utility's competitive bidding process, and to advise the utility and Commission on matters arising out of the competitive bidding process, as described in Part III.C of the Framework.

"IPP" means an independent power producer that is not subject to the Commission's regulation or jurisdiction as a public utility.

"IRP" means an electric utility's Integrated Resource Plan that has been submitted to the Commission for review and approval in the utility's IRP proceeding, in accordance with the Commission's IRP Framework. The overall goal of integrated resource planning is the identification of the resources or the mix of resources for meeting near and long-term customer energy needs in an efficient and reliable manner at the lowest reasonable cost. Each electric utility is responsible for developing an IRP that meets the energy needs of its customers. The IRP Framework requires each electric utility to develop a long-range, twenty (20)-year plan and a medium-range five (5)-year action plan to be submitted on a three (3)-year planning cycle for the Commission's review and approval. The IRP process is a vehicle for the Commission, the electric utilities, energy stakeholders, and the public to understand and influence the planning process involved in identifying and evaluating the mix of demand-side and supply-side energy resources needed to meet near and long-term energy needs in an efficient and reliable manner at the lowest reasonable cost.

"IRP Framework" means the Commission's Framework for Integrated Resource Planning, dated May 22, 1992, as amended by In re Public Util. Comm'n, Docket No. 05-0075, Decision and Order No. 22490, filed on May 26, 2006.

"Parallel Plan" means the generating unit plan (comprised of one or multiple generation resources) that is pursued by the electric utility in parallel with a third-party project selected in an RFP until there is reasonable assurance that the third-party project will reach commercial operation, or until such action can no longer be justified to be reasonable. The utility's Parallel Plan unit(s) may be different from that proposed in the utility's bid. The term "utility's bid," as used herein, refers to a utility's proposal advanced in response to a need that is addressed by its RFP.

"PPA" means a power purchase agreement or contract to purchase firm capacity, energy, or both, from an electric utility, pursuant to the terms of this Framework.

"PURPA" means the Federal Public Utility Regulatory Policies Act of 1978, as amended.

"QF" means a cogeneration facility or a small power production facility that is a qualifying facility under Subpart B of 18 Code of Federal Regulations §§ 292.201 – 292.211. See also 18 Code of Federal Regulations § 291.201(b)(1) (definition of "qualifying facility").

"RFP" means a written request for proposal issued by the electric utility to solicit bids from interested third-parties, and where applicable from the utility or its affiliate, to supply a future generation resource or a block of generation resources to the utility pursuant to the competitive bidding process.

II. CONTEXT FOR COMPETITIVE BIDDING

A. USE OF COMPETITIVE BIDDING

1. This Framework applies to electric utilities regulated by and subject to the Commission's jurisdiction pursuant to Chapter 269, Hawaii Revised Statutes.
2. A determination shall be made by the Commission in a utility's IRP proceeding as to whether a competitive bidding process shall be used to acquire a future generation resource or a block of generation resources.
3. Competitive bidding, unless the Commission finds it to be unsuitable, is established as the required mechanism for acquiring a future generation resource or a block of generation resources, whether or not such resource has been identified in a utility's IRP. The basis for such a finding shall be explained by the utility in its IRP, and the determination shall be made by

the Commission in its review of the utility's IRP. See Part II.C, below. The following conditions and possible exceptions apply:

- a. Competitive bidding will benefit Hawaii when it: (i) facilitates an electric utility's acquisition of supply-side resources in a cost-effective and systematic manner; (ii) offers a means by which to acquire new generating resources that are overall lower in cost or better performing than the utility could otherwise achieve; (iii) does not negatively impact the reliability or unduly encumber the operation or maintenance of Hawaii's unique island electric systems; (iv) promotes electric utility system reliability by facilitating the timely acquisition of needed generation resources and allowing the utility to adjust to changes in circumstances; and (v) is consistent with IRP objectives.
- b. Under certain circumstances, to be considered by the Commission in the context of an electric utility's request for waiver under Part II.A.4, below, competitive bidding may not be appropriate. These circumstances include: (i) when competitive bidding will unduly hinder the ability to add needed generation in a timely fashion; (ii) when the utility and its customers will benefit more if the generation resource is owned by the utility rather than by a third-party (for example, when reliability will be jeopardized by the utilization of a third-party resource); (iii) when more cost-effective or better performing generation resources are more likely to be acquired more efficiently through different procurement processes; or (iv) when competitive bidding will impede or create a disincentive for the achievement of IRP goals, renewable energy portfolio standards or other government objectives and policies, or conflict with requirements of other controlling laws, rules, or regulations.
- c. Other circumstances that could qualify for a waiver include: (i) the expansion or repowering of existing utility generating units; (ii) the acquisition of near-term power supplies for short-term needs; (iii) the acquisition of power from a non-fossil fuel facility (such as a waste-to-energy facility) that is being installed to meet a governmental objective; and (iv) the acquisition of power supplies needed to respond to an emergency situation.
- d. Furthermore, the Commission may waive this Framework or any part thereof upon a showing that the waiver will likely result in a lower cost supply of electricity to the utility's general body of ratepayers, increase the reliable supply of electricity to the utility's general body of ratepayers, or is otherwise in the public interest.

- e. This Framework does not apply to: (i) the three utility projects currently being developed: Hawaiian Electric Company, Inc.'s Campbell Industrial Park CT-1, Hawaii Electric Light Company, Inc.'s Keahole ST-7, and Maui Electric Company, Ltd.'s Maalaea M-18; (ii) offers to sell energy on an as-available basis by non-fossil fuel producers that were submitted to an electric utility before this Framework was adopted; and (iii) offers to sell firm energy and/or capacity by non-fossil fuel producers that were submitted to an electric utility before this Framework was adopted, or that resulted from negotiations with respect to offers to sell energy on an as-available basis by non-fossil fuel producers that were submitted to an electric utility before this Framework was adopted; provided that negotiations with respect to such firm energy and/or capacity offers are concluded no later than December 31, 2007.
- f. This Framework also does not apply to: (i) generating units with a net output available to the utility of 1% or less of a utility's total firm capacity, including that of independent power producers, or with a net output of 5 MW or less, whichever is lower (for systems that cover more than one island (i.e., Maui Electric Company, Ltd.'s system, which has generation on Maui, Molokai and Lanai), the system firm capacity will be determined on a consolidated basis); (ii) distributed generating units at substations and other sites installed by the utility on a temporary basis to help address reserve margin shortfalls; (iii) customer-sited, utility-owned distributed generating units that have been approved by the Commission in accordance with the requirements of Decision and Order No. 22248, issued January 27, 2006, as clarified by Order No. 22375, issued April 6, 2006 in Docket No. 03-0371; and (iv) renewable energy or new technology generation projects under 1 MW installed for "proof-of-concept" or demonstration purposes.
- g. This Framework also does not apply to qualified facilities and non-fossil fuel producers with respect to: (i) power purchase agreements for as-available energy; provided that an electric utility is not required to offer a term for such power purchase agreements that exceeds five years if it has a bidding program that includes as-available energy facilities; (ii) power purchase agreements for facilities with a net output available to the utility of 2 MW or less; (iii) power purchase agreement extensions for three years or less on substantially the same terms and conditions as the existing power purchase agreements and/or on more favorable terms and conditions; (iv) power purchase agreement modifications to acquire additional firm capacity or firm capacity from an existing facility, or from a facility that is modified without a major air

permit modification; and (v) renegotiations of power purchase agreements in anticipation of their expiration, approved by the Commission.

- h. When a competitive bidding process will be used to acquire a future generation resource or a block of generation resources, the generating units acquired under a competitive bidding process must meet the needs of the utility in terms of the reliability of the generating unit, the characteristics of the generating unit required by the utility, and the control the utility needs to exercise over operation and maintenance in order to reasonably address system integration and safety concerns.
- 4. The procedure for seeking a waiver is as follows:
 - a. Applications for waivers, and transition to competitive bidding requirements for new generation projects.
 - (i) For proposed generation projects included in, or consistent with, IRPs approved by the Commission prior to the effective date of this Framework, the electric utility shall file an application for waiver with the Commission, as soon as practicable, consistent with Part II.A.4.a(iv), below.
 - (ii) For proposed generation projects included in, or consistent with, the IRP filed for Commission approval in In re Hawaiian Elec. Co., Inc., Docket 03-0253, the electric utility shall file any waiver request no later than sixty (60) days following a Commission order approving the IRP.
 - (iii) For all proposed generation projects included in, or consistent with, IRPs that have not yet been filed with the Commission for approval as of the effective date of this Framework, any waiver request shall accompany the filing of the proposed IRP for the Commission's approval.
 - (iv) An electric utility that seeks a waiver shall take all steps reasonably required to submit its application for waiver as soon as practicable such that, in the event the Commission denies the request, sufficient time remains to conduct competitive bidding without imprudently risking system reliability.

- b. In no event shall a Commission decision granting a waiver be construed as determinative of whether an electric utility acted prudently in the matter.
5. Exemption - ownership structure of an electric utility. Upon a showing that an entity has an ownership structure in which there is no substantial difference in economic interests between its owners and its customers, such that the electric utility has no disincentive to pursue new generation projects through competitive bidding, the Commission will exempt such entity from this Framework.

B. SCOPE OF COMPETITIVE BIDDING

1. An electric utility's IRP shall specify the proposed scope of the RFP for any specific generation resource or block of generation resources that the IRP states will be subject to competitive bidding.
2. Competitive bidding shall enable the comparison of a wide range of supply-side options, including PPAs, utility self-build options, turnkey arrangements (i.e., build and transfer options), and tolling arrangements where practical.
3. Each electric utility shall take steps to provide notice of its RFPs, and to encourage participation from a full range of prospective bidders. PURPA qualifying facilities, IPPs, the host utility, and its affiliates, and other utilities shall be eligible to participate in any supply-side RFP.
4. Competitive bidding processes may vary by resource type, provided those processes are consistent with this Framework. For instance, solicitation processes for distributed generation facilities may be different from those for central station generating supplies. An electric utility may establish a separate procurement process (such as a "set aside" or separate RFP process) to acquire as-available or firm capacity from renewable generating facilities.
5. RFP processes shall be flexible, and shall not include unreasonable restrictions on sizes and types of projects considered, taking into account the appropriate sizes and types identified in the IRP process.

C. RELATIONSHIP TO INTEGRATED RESOURCE PLANNING

1. The Commission's IRP Framework applicable to each electric utility shall continue to be used to set the strategic direction of resource planning by the electric utilities. In order for competitive bidding to be effectively and efficiently integrated with a utility's IRP, stakeholders must work

cooperatively to identify and adhere to appropriate timelines, which may need to be expedited.

2. This Framework is intended to complement the Commission's IRP Framework.
3. A determination shall be made by the Commission in an IRP proceeding as to whether a competitive bidding process shall be used to acquire a generation resource or a block of generation resources that is included in the IRP. Actual competitive bidding for IRP-designated resources will normally occur after the IRP is approved, through an RFP, which is consistent with the IRP approved by the Commission. However, during the transition into competitive bidding processes for new generation under this Framework, if the IRP in effect was approved prior to the effective date of this Framework, a utility shall initiate competitive bidding (or request a waiver under Part II.A.4) as may be required by this Framework. As required by the IRP Framework, such projects must be identified in or consistent with the IRP in effect at the time.
4. Integration of competitive bidding into IRP. The general approach to integration has four parts, in sequence:
 - a. The electric utility conducts an IRP process, culminating in an IRP that identifies a preferred resource plan (including capacity, energy, timing, technologies, and other preferred attributes). This IRP shall identify those resources for which the utility proposes to hold competitive bidding, and those resources for which the utility seeks a waiver from competitive bidding, and shall include an explanation of the facts supporting a waiver, based on the waiver criteria set forth in Part II.A.3, above.
 - b. The Commission approves, modifies, or rejects the IRP, including any requests for waiver, under the IRP Framework and this Framework.
 - c. The electric utility conducts a competitive bidding process, consistent with the IRP; such process shall include the advance filing of a draft RFP with the Commission, which shall be consistent with the IRP.
 - d. The electric utility selects a winner from the bidders. (But see Part II.C.6, below, concerning the process when there are no bidders worth choosing.).
5. An evaluation of bids in a competitive bidding process may reveal desirable projects that were not included in an Approved IRP.

These projects may be selected if it can be demonstrated that the project is consistent with an Approved IRP and that such action is expected to benefit the utility and its ratepayers.

6. An evaluation of bids in a competitive bidding process may reveal that the acquisition of any of the resources in the bid will not assist the utility in fulfilling its obligations to its ratepayers. In such a case, the utility may determine not to acquire such resources and shall notify the Commission accordingly. Such notification shall include: (a) an explanation of why the competitive bidding process failed to produce a viable project; and (b) a description of what actions the electric utility intends to take to replace the resource sought through the unsuccessful competitive bidding process.

D. MITIGATION OF RISKS ASSOCIATED WITH COMPETITIVE BIDDING

1. To carry out its competitive bidding obligations consistently with its resource sufficiency obligations, the electric utility must conduct, or consider conducting, three types of activities: self-build, parallel planning, and contingency planning. The utility's self-build obligation is addressed in Parts VI.A.1 and VI.C, below. The electric utility's parallel planning and contingency planning activities are discussed in Parts II.D.2 to II.D.4, below.
2. In consideration of the isolated nature of the island utility systems, the utility may use a Parallel Plan option to mitigate the risk that an IPP's option may fail. Under this Parallel Plan option, the utility may continue to proceed with its Parallel Plan until it is reasonably certain that the awarded IPP project will reach commercial operation, or until such action can no longer be justified to be reasonable. The electric utility shall use prudent electric utility practices to determine the nature, amount, and timing of the parallel planning activities, and take into account (without limitation) the cost of parallel planning and the probability of third-party failure. The electric utility's Parallel Plan unit(s) may differ from that proposed in the electric utility's bid. For each project that is subject to competitive bidding, the electric utility shall submit a report on the cost of parallel planning upon the Commission's request.
3. The electric utility may require bidders (subject to the Commission's approval with other elements of a proposed RFP) to offer the utility the option to purchase the project under certain conditions or in the event of default by the seller (i.e., the bidder), subject to commercially reasonable payment terms.

4. The utility's Contingency Plan need not be the resource identified as the preferred resource in its Approved IRP Plan.

III. ROLES IN COMPETITIVE BIDDING

A. ELECTRIC UTILITY

1. The role of the host electric utility in the competitive bidding process shall include:
 - a. Designing the solicitation process, establishing evaluation criteria consistent with its overall IRP objectives, and specifying timelines;
 - b. Designing the RFP documents and proposed forms of PPAs and other contracts;
 - c. Implementing and managing the RFP process, including communications with bidders;
 - d. Evaluating the bids received;
 - e. Selecting the bids for negotiations based on established criteria;
 - f. Negotiating contracts with selected bidders;
 - g. Determining, where and when feasible, the interconnection facilities and transmission upgrades necessary to accommodate new generation;
 - h. Competing in the solicitation process with a self-build option, unless a waiver is granted; and
 - i. Providing the Independent Observer with all requested information.
2. In designing each competitive bidding process, each electric utility shall:
 - (a) take prudent steps to obtain information on the experiences of similarly-situated utilities and utilities that have conducted competitive bidding processes to address similar needs; and
 - (b) take prudent steps to take full advantage of available industry sources of related information.
3. Access to Utility Sites. The utility shall consider, on a case-by-case basis before an RFP is issued, offering one or several utility-owned or controlled sites to bidders in each competitive bidding process. The utility shall consider such factors as:

- a. The anticipated specific non-technical terms of potential proposals. An example of one factor that will need to be examined is whether benefits will be expected from a "turnkey" project that the utility will or may eventually own and operate.
- b. The feasibility of the installation. Examples of the factors that may need to be examined in order to evaluate the feasibility of the installation may include, but are not be limited to the following:
 - i. Specific physical and technical parameters of anticipated non-utility installations, such as the technology that may be installed, space and land area requirements, topographic, slope and geotechnical constraints, fuel logistics, water requirements, number of site personnel, access requirements, waste and emissions from operations, noise profile, electrical interconnection requirements, and physical profile; and
 - ii. How the operation, maintenance, and construction of each installation will affect factors such as security at the site, land ownership issues, land use and permit considerations (e.g., compatibility of the proposed development with present and planned land uses), existing and new environmental permits and licenses, impact on operations and maintenance of existing and future facilities, impact to the surrounding community, change in zoning permit conditions, and safety of utility personnel.
- c. The utility's anticipated future use of the site. Examples of why it may be beneficial for the utility to maintain site control may include, but are not limited to the following: (i) to ensure that power generation resources can be constructed to meet system reliability requirements; (ii) to retain flexibility for the utility to perform crucial parallel planning for a utility owned option to back-up the unfulfilled commitments, if any, of third-party developers of generation; and (iii) to retain the flexibility for the utility to acquire the unique efficiency gains of combined-cycle conversions and repowering projects of existing utility simple-cycle combustion turbines and steam fired generating facilities, respectively.
- d. The effect on competitive forces of denying bidders the ability to use the site, taking into account whether the unavailability of adequate sites for non-utility bidders gives the electric utility a competitive advantage.

- e. Where the utility has chosen not to offer a site to a third-party, the electric utility shall present its reasons, specific to the project and sites at issue, in writing to the Independent Observer and the Commission.
- 4. The utility shall submit to the Commission for review and approval (subject to modification if necessary), a Code of Conduct described in Part IV.H.9.c, below, prior to the commencement of any competitive bid process under this Framework.

B. HAWAII PUBLIC UTILITIES COMMISSION

- 1. The primary role of the Commission is to ensure that: (a) each competitive bidding process conducted pursuant to this Framework is fair in its design and implementation so that selection is based on the merits; (b) projects selected through competitive bidding processes are consistent with the utility's Approved IRP; (c) the electric utility's actions represent prudent practices; and (d) throughout the process, the utility's interests are aligned with the public interest even where the utility has dual roles as designer and participant.
- 2. The Commission will review, and at its option, approve or modify, each proposed RFP before it is issued, including any proposed form of contracts and other documentation that will accompany the RFP.
- 3. The Commission shall be the final arbiter of disputes that arise among parties in relation to a utility's competitive bidding process, to the extent described in Part V, below.
- 4. The Commission shall review, and approve or reject, the contracts that result from competitive bidding processes conducted pursuant to this Framework, in a separate docket upon application by the utility in which the expedited process in Part III.B.8 shall not apply. In reviewing such contracts, the Commission may establish review processes that are appropriate to the specific circumstances of each solicitation, including the time constraints that apply to each commercial transaction.
- 5. If the utility identifies its self-build or turnkey project as superior to bid proposals, the utility shall seek Commission approval in keeping with established CIP Approval Requirements.
- 6. The Commission shall review and approve (and modify if necessary), the electric utility's tariffs for interconnection and transmission upgrades required by Part IV.I of this Framework.

7. The Commission shall review any complaint that the electric utility is not complying with the Framework, pursuant to Part V.
8. Timely Commission review, approval, consent, or other action described in this Framework is essential to the efficient and effective execution of this competitive bidding process. Accordingly, to expedite Commission action in this competitive bidding process, whenever Commission review, approval, consent, or action is required under this Framework, the Commission may do so in an informal expedited process. The Commission hereby authorizes its Chairman, or his designee (which designee, may be another Commissioner, a member of the Commission staff, Commission hearings officer, or a Commission hired consultant), in consultation with other Commissioners, Commission staff, and the Independent Observer, to take any such action on behalf of the Commission.

C. INDEPENDENT OBSERVER

1. An Independent Observer is required whenever the utility or its affiliate seeks to advance a project proposal (i.e., in competition with those offered by bidders) in response to a need that is addressed by its RFP, or when the Commission otherwise determines. An Independent Observer will monitor the competitive bidding process and will report on the progress and results to the Commission, sufficiently early so that the Commission is able to address any defects and allow competitive bidding to occur in time to meet capacity needs. Any interaction between a utility and its affiliate during the course of a solicitation process, beginning with the preparation of the RFP, shall be closely monitored by the Independent Observer. Specific tasks to be performed by the Independent Observer shall be identified by the utility in its proposed RFP and as may be required by the Commission.
2. Independent Observer obligations. The Independent Observer will have duties and obligations in two areas: Advisory and Monitoring.
 - a. Advisory. The Independent Observer shall:
 - (i) Certify to the Commission that at each of the following steps, the electric utility's judgments created no unearned advantage for the electric utility or any affiliate:
 - (1) Pre-qualification criteria;
 - (2) RFP;
 - (3) Model PPA to be attached to the RFP;
 - (4) Selection criteria;
 - (5) Evaluation of bids; and

- (6) Final decision to purchase power or proceed with self-build option.
- (ii) Advise the electric utility on its decision-making during, and with respect to, each of the electric utility's actions listed in the preceding item;
- (iii) Report immediately to the electric utility's executive in charge of ensuring compliance with this Framework, and the Commission, any deviations from the Framework or violations of any procurement rules;
- (iv) After the electric utility's procurement selection is completed, provide the Commission with:
 - (1) An overall assessment of whether the goals of the RFP were achieved, such goals to include without limitation the attraction of a sufficient number of bidders and the elimination of actual or perceived utility favoritism for its own or an affiliate's project; and
 - (2) Recommendations for improving future competitive bidding processes.
- (v) Be available to the Commission as a witness if required to evaluate a complaint filed against an electric utility for non-compliance with this Framework, or if required in a future rate case if questions of prudence arise.

b. Monitoring. The Independent Observer shall:

- (i) Monitor all steps in a competitive bidding process, beginning with the preparation of the RFP, or at such earlier time as determined by the Commission;
- (ii) Monitor communications (and communications protocols) with bidders;
- (iii) Monitor adherence to Codes of Conduct;
- (iv) Monitor contract negotiations with bidders;
- (v) Monitor all interactions between the electric utility and its affiliate, during all events affecting a solicitation process, if the affiliate may be a bidder; and

- (vi) Report to the Commission on monitoring results during each stage of the competitive process, sufficiently early so that the Commission can correct defects or eliminate uncertainties without endangering project milestones.
- 3. The Independent Observer shall have no decision-making authority, and no obligation to resolve disputes, but may offer to mediate between disputing parties.
 - 4. The Independent Observer shall provide comments and recommendations to the Commission, at the Commission's request, to assist in resolving disputes or in making any required determinations under this Framework.
 - 5. Independent Observer qualifications. The Independent Observer shall be qualified for the tasks the observer must perform. Specifically, the Independent Observer shall:
 - a. Be knowledgeable about, or be able rapidly to absorb knowledge about, any unique characteristics and needs of the electric utility;
 - b. Be knowledgeable about the characteristics and needs of small, non-interconnected island electric grids, and be aware of the unique challenges and operational requirements of such systems;
 - c. Have the necessary experience and familiarity with utility modeling capability, transmission system planning, operational characteristics, and other factors that affect project selection;
 - d. Have a working knowledge of common PPA terms and conditions, and the PPA negotiations process;
 - e. Be able to work effectively with the electric utility, the Commission, and its staff during the bid process; and
 - f. Be able to demonstrate impartiality.
 - 6. Selection and contracting. The electric utility shall: (a) identify qualified candidates for the role of Independent Observer (and also shall consider qualified candidates identified by the Commission and prospective participants in the competitive bidding process); (b) seek and obtain Commission approval of its final list of qualified candidates; and (c) select an Independent Observer from among the Commission-approved qualified candidates. The electric utility's contract with the Independent Observer shall be acceptable to the Commission, and provide, among other matters, that the Independent Observer: (a) report to the Commission and carry out such tasks as directed by the Commission,

including the tasks described in this Framework; (b) cannot be terminated and payment cannot be withheld without the consent of the Commission; and (c) can be terminated by the Commission without the utility's consent, if the Commission deems it to be in the public interest in the furtherance of the objectives of this Framework to do so. The utility may recover prudently incurred Independent Observer costs from its customers upon approval of the Commission in a rate case or other appropriate proceeding, and may defer the costs prudently incurred for the Independent Observer (i.e., deferred accounting).

7. As part of the RFP design process, the utility shall develop procedures to be included in the RFP by which any participant in the competitive bidding process may present to the Commission, for review and resolution, positions that differ from those of the Independent Observer (i.e., in the event the Independent Observer makes any representations to the Commission upon which the participant does not agree).

IV. THE REQUEST FOR PROPOSALS PROCESS

A. GENERAL

1. Competitive bidding shall be structured and implemented in a way that facilitates an electric utility's acquisition of supply-side resources identified in a utility's IRP in a cost-effective and systematic manner, consistent with state energy policy. All costs and benefits incurred or received by the utility and its customers shall be taken into account in the bid evaluation and selection process.
2. Competitive bidding shall be structured and implemented in a flexible and efficient manner that promotes electric utility system reliability by facilitating the timely acquisition of needed resources and allowing the utility to adjust to changes in circumstances.
 - a. The implementation of competitive bidding cannot be allowed to negatively impact reliability of the electric utility system.
 - b. The generating units acquired under a competitive bidding process must meet the needs of the utility in terms of the reliability of the generating unit, the characteristics of the generating unit required by the utility, and the control the utility needs to exercise over operation and maintenance in order to minimize system integration concerns.

3. The competitive bidding process shall ensure that proposals and bidders are judged on the merits, without being unduly burdensome to the electric utilities and the Commission.
 - a. The competitive bidding process shall include an RFP and supporting documentation by which the utility sets forth the requirements to be fulfilled by bidders and describes the process by which it will: (i) conduct its solicitation; (ii) obtain consistent and accurate information on which to evaluate bids; (iii) implement a consistent and equitable evaluation process; and (iv) systematically document its determinations. The RFP shall also describe the role of the Independent Observer and bidders' opportunities for challenges and for dispute resolution.
 - b. When a utility advances its own project proposal (i.e., in competition with those offered by bidders) or accepts a bid from an affiliate, the utility shall take all reasonable steps, including any steps required by the Commission, to mitigate concerns over an unfair or unearned competitive advantage that may exist or reasonably be perceived by other bidders or stakeholders.
4. If an IPP, turnkey, or affiliate proposal is selected as a result of the RFP process, one or more contracts are the expected result. Proposed forms of PPAs and other contracts that may result from the RFP process (e.g., PPA for firm capacity, PPA for as-available energy, turnkey contract, etc.) shall be included with each RFP. The RFP shall specify whether any opportunity exists to propose or negotiate changes to the proposed form of PPA.

B. DESIGN OF THE COMPETITIVE BIDDING SOLICITATION PROCESS

1. The competitive bidding solicitation process shall include the following:
 - a. Design of the RFP and supporting documents;
 - b. Issuance of the RFP;
 - c. Development and submission of proposals by bidders;
 - d. A "multi-stage evaluation process" to reduce bids down to a short list or "award group" (i.e., a process that includes, without limitation: (i) receipt of the proposals; (ii) completeness check; (iii) threshold or minimum requirements evaluation; (iv) initial evaluation including price screen/non-price assessment; (v) selection of a short list; (vi) detailed evaluation or portfolio

development; and (vii) selection of award group for contract negotiation);

- e. Contract negotiations (when a third-party bid is selected); and
 - f. Commission approval of any resulting contract.
2. The RFP shall identify any unique system requirements and provide information regarding the requirements of the utility, important resource attributes, and criteria used for the evaluation. For example, if the utility values dispatchability or operating flexibility, the RFP shall: (a) request that a bidder offer such an option; and (b) explain how the utility will evaluate the impacts of dispatchability or operational flexibility in the bid evaluation process.
 3. The RFP (including the response package, proposed forms of PPAs and other contracts) shall describe the bidding guidelines, the bidding requirements to guide bidders in preparing and submitting their proposals, the general bid evaluation and selection criteria, the risk factors important to the utility, and, to the extent practicable, the schedule for all steps in the bidding process.
 4. The utility may charge bidders a reasonable fee, to be reviewed by the Independent Observer, for participating in the RFP process.
 5. Other Content of RFP. The RFP shall also contain:
 - a. Information on the relationship between an electric utility and its affiliate, and the circumstances under which an electric utility's affiliate may participate;
 - b. An explanation of the procedures by which any person may present to the Commission positions that differ from those of the Independent Observer; and
 - c. A statement that if disputes arise under this Framework, the dispute resolution process established in this Framework will control.
 6. The process leading to the distribution of the RFP shall include the following steps (each step to be monitored and reported on by the Independent Observer), unless the Commission modifies this process for a particular competitive bid:
 - a. The utility designs a draft RFP, then files its draft RFP and supporting documentation with the Commission;

- b. The utility holds a technical conference to discuss the draft RFP with interested parties (which may include potential bidders);
 - c. Interested parties submit comments on the draft RFP to the utility and the Commission;
 - d. The utility determines whether and how to incorporate recommendations from interested parties in the draft RFP;
 - e. The utility submits its final, proposed RFP to the Commission for its review and approval (and modification if necessary) according to the following procedure:
 - (i) The Independent Observer shall submit its comments and recommendations to the Commission concerning the RFP and all attachments, simultaneously with the electric utility's proposed RFP.
 - (ii) The utility shall have the right to issue the RFP if the Commission does not direct the utility to do otherwise within thirty (30) days after the Commission receives the proposed RFP and the Independent Observer's comments and recommendations.
7. A pre-qualification requirement is a requirement that a bidder must satisfy to be eligible to bid. A pre-qualification process may be incorporated in the design of some bidding processes, depending on the specific circumstances of the utility and its resource needs. Any pre-qualification requirements shall apply equally to independent bidders, the electric utility's self-build bid, and the bid of any utility's affiliate.
8. As part of the design process, the utility shall develop and specify the type and form of threshold criteria that will apply to bidders, including the utility's self-build proposals. Examples of potential threshold criteria include requirements that bidders have site control, maintain a specified credit rating, and demonstrate that their proposed technologies are mature.
9. The design process shall address credit requirements and security provisions, which apply to: (a) the qualification of bidders; and (b) bid evaluation processes.
10. The utility shall have the discretion to modify the RFP or solicit additional bids from bidders after reviewing the initial bids, provided that such discretion is clearly identified in the RFP and any modification is reviewed by the Independent Observer and submitted to the Commission along with the Independent Observer's comments. The electric utility may

issue the modified RFP thirty (30) days after the Commission has received these materials, unless the Commission directs otherwise.

11. All involved parties shall plan, collaborate, and endeavor to complete the final RFP within ninety (90) days from the date the electric utility submits the draft RFP to the Commission.

C. FORMS OF CONTRACTS

1. The RFP shall include proposed forms of PPAs and other contracts, with commercially reasonable terms and conditions that properly allocate risks among the contracting parties in light of circumstances. The terms and conditions of the contracts shall be specified to the extent practical, so that bidders are aware of, among other things, performance requirements, pricing options, key provisions that affect risk allocation (including those identified in sub-paragraph 2 below), and provisions that may be subject to negotiation. Where contract provisions are not finalized or provided in advance of RFP issuance (e.g., because certain contract provisions must reflect features of the winning bidder's proposal such as technology or location), the RFP shall so indicate.
2. The provisions of a proposed contract shall address matters such as the following (unless inapplicable): (a) reasonable credit assurance and security requirements appropriate to an island system that reasonably compensates the utility and its customers if the project sponsor fails to perform; (b) contract buyout and project acquisition provisions; (c) in-service date delay and acceleration provisions; (d) liquidated damage provisions that reflect risks to the utility and its customers; and (e) contractual terms to allow for turnkey options.
3. The proposed contracts may allow the utility the option to request conversion of the plant to an alternate fuel if conditions warrant, with appropriate modifications to the contract to account for the bidder/seller's conversion costs and to assign the benefits of any lower fuel costs.
4. The RFP shall specify which terms in the proposed forms of contract are subject to negotiation or alternative proposals, or from which a bidder may request exceptions. For these terms, bidders may submit alternative language as part of their bids, provided that any such variation is not inconsistent with any IRP which described the resource at issue.

D. ISSUANCE OF THE RFP AND DEVELOPMENT OF PROPOSALS

1. Each electric utility shall take steps to provide notice of its RFPs to, and encourage participation from, the full community of prospective bidders.

2. Bidders may be required to submit a "notice of intent to bid" to the electric utility.
3. The electric utility shall develop and implement a formal process to respond to bidders' questions.
4. The electric utility may conduct a bidders' conference.
5. The electric utility shall provide bidders with access to information through a website where it can post documents and information.
6. The process shall require all third-party bids to be submitted by the deadline specified in the RFP, except that the utility's self-bid shall be submitted one day in advance.
7. Bids may be deemed non-conforming if they do not meet or otherwise provide all of the information requested in an RFP. At the utility's discretion, in consultation with the Independent Observer, proposals that are non-conforming may be given additional time to remedy their non-conformity. The utility, in consultation with the Independent Observer, may decline to consider any bid that is non-conforming.

E. BID EVALUATION / SELECTION CRITERIA

1. The utility, monitored by the Independent Observer, shall compare bids received in response to an RFP to one another and to the utility's self-build project (or the generic resource identified in the IRP, if no self-build project proposal is being advanced).
2. The evaluation criteria and the respective weight or consideration given to each such criterion in the bid evaluation process may vary from one RFP to another (depending, for example, on the RFP scope and specific needs of the utility).
3. The bid evaluation process shall include consideration of differences between bidders with respect to proposed contract provisions, and differences in anticipated compliance with such provisions, including but not limited to provisions intended to ensure:
 - a. Generating unit and electric system reliability;
 - b. Appropriate risk allocations;
 - c. Counter-party creditworthiness; and

d. Bidder qualification.

4. Proposals shall be evaluated based on a consistent and reasonable set of economic and fuel price assumptions, to be specified in the RFP.
5. Both price and non-price evaluation criteria (e.g., externalities and societal impacts, and preferred attributes consistent with the Approved IRP), shall be described in the RFP, and shall be considered in evaluating proposals.
6. In evaluating competing proposals, all relevant incremental costs to the electric utility and its ratepayers shall be considered (e.g., these may include transmission costs and system impacts, and the reasonably foreseeable balance sheet and related financial impacts of competing proposals).
7. The amount of purchased power that a utility already has on its system, in terms of reliability and dispatchability, and the impacts that increasing the amount of purchased power may have, in terms of reliability and dispatchability, shall be taken into account in the bid evaluation. The RFP shall specify the methodology for considering this effect. Such methodology shall not cause double-counting with the financial effects discussed in sub-paragraph 6, above, and sub-paragraph 8, below.
8. The impact of purchased power costs on the utility's balance sheets, and the potential for resulting utility credit downgrades (and higher borrowing costs), may be accounted for in the bid evaluation. Where the utility has to restructure its balance sheet and increase the percentage of more costly equity financing in order to offset the impacts of purchasing power on its balance sheet, this rebalancing cost shall also be taken into account in evaluating the total cost of a proposal for a new generating unit if IPP-owned, and it may be a requirement that bidders provide all information necessary to complete these evaluations. The RFP shall describe the methodology for considering financial effects.
9. The type and form of non-price threshold criteria shall be identified in the RFP. Such threshold criteria may include, among other criteria, the following:
 - a. Project development feasibility criteria (e.g., siting status, ability to finance, environmental permitting status, commercial operation date certainty, engineering design, fuel supply status, bidder experience, and reliability of the technology);
 - b. Project operational viability criteria (e.g., operation and maintenance plan, financial strength, environmental compliance, and environmental impact);

- c. Operating profile criteria (e.g., dispatching and scheduling, coordination of maintenance, operating profile such as ramp rates, and quick start capability); and
 - d. Flexibility criteria (e.g., in-service date flexibility, expansion capability, contract term, contract buy-out options, fuel flexibility, and stability of the price proposal).
10. The weights for each non-price criterion shall be fully specified by the utility in advance of the submission of bids, as they may be based on an iterative process that takes into account the relative importance of each criterion given system needs and circumstances in the context of a particular RFP. The Commission, however, may approve of less than full specification prior to issuance of the RFP. Since the subjectivity inherent in non-price criteria creates risk of bias and diminution in bidders' trust of the process, the RFP must specify likely areas of non-price evaluation, and the evaluation process must be closely monitored and publicly reported on by the Independent Observer.

F. EVALUATION OF THE BIDS

- 1. The evaluation and selection process shall be identified in the RFP, and may vary based on the scope of the RFP. In some RFP processes, a multi-stage evaluation process may be appropriate.
- 2. The electric utility shall document the evaluation and selection process for each RFP process, for review by the Commission in approving the outcome of the process (i.e., in approving a PPA or a utility self-build proposal).
- 3. A detailed system evaluation process, which uses models and methodologies that are consistent with those used in the utility's IRP processes, may be used to evaluate bids. In anticipation of such evaluation processes, the RFP shall specify the data required of bidders.

G. CONTRACT NEGOTIATIONS

- 1. There may be opportunities to negotiate price and non-price terms to enhance the value of the contract for the bidder, the utility, and its ratepayers. Examples of such provisions that may be open for negotiation include fuel supply arrangements and project operating characteristics. Negotiations shall be monitored by the Independent Observer.
- 2. Contract interaction with affiliates shall be permitted, provided that such interaction is closely monitored by an Independent Observer.

3. The electric utility may use competitive negotiations among short-listed bidders.

H. FAIRNESS PROVISIONS AND TRANSPARENCY

1. The competitive bidding process shall judge all bidders on the merits only.
2. During the bidding process, the electric utility shall treat all bidders, including any utility affiliate, the same in terms of access to information, time of receipt of information, and response to questions.
3. A "closed bidding process" is generally anticipated, rather than an "open bidding process." Under one type of closed bidding process, bidders are informed through the RFP of: (a) the process that will be used to evaluate and select proposals; (b) the general bid evaluation and selection criteria; and (c) the proposed forms of PPAs and other contracts (e.g., turnkey contract). However, bidders shall not have access to the utility's bid evaluation models, the detailed criteria used to evaluate bids, or information contained in proposals submitted by other bidders. (But see sub-paragraph 4(c), below, regarding a losing bidder's access to the model.)
4. If the electric utility chooses to use a closed process:
 - a. The utility shall provide the Independent Observer, if an Independent Observer is required, with all the necessary information to allow the Independent Observer to understand the model and to enable the Independent Observer to observe the entire analysis in order to ensure a fair process; and
 - b. After the utility has selected a bidder, the utility shall meet with the losing bidder or bidders to provide a general assessment of the losing bidder's specific proposal if requested by the losing bidder within seven (7) days of the selection.
5. The host electric utility shall be allowed to consider its own self-bid proposals in response to generation needs identified in its RFP.
6. Procedures shall be developed by the utility prior to the initiation of the bidding process to define the roles of the members of its various project teams, to outline communications processes with bidders, and to address confidentiality of the information provided by bidders. Such procedures shall be submitted in advance to the Independent Observer and the Commission for comment.

7. If the IRP indicates that a competitive bidding process will be used to acquire a generation resource or a block of generation resources, then the utility will indicate, in the submittal of its draft RFP to the Commission for review, which of the RFP process guidelines will be followed, the reasons why other guidelines will not be followed in whole or in part, and other process steps proposed based on good solicitation practice; provided that the Commission may require that other process steps be followed.
8. If proposed, utility self-build facilities or other utility-owned facilities (e.g., turnkey facilities), or facilities owned by an affiliate of the host utility, are to be compared against IPP proposals obtained through an RFP process. The Independent Observer shall monitor the utility's conduct of its RFP process, advise the utility if there are any fairness issues, and report to the Commission at various steps of the process, to the extent prescribed by the Commission. Specific tasks to be performed by the Independent Observer shall be identified by the utility in its proposed RFP. The Independent Observer will review and track the utility's execution of the RFP process to ascertain that no undue preference is given to an affiliate, the affiliate's bid, or to self-build or other utility-owned facilities. The Independent Observer's review shall include, to the extent the Commission or the Independent Observer deems necessary, each of the following steps, in addition to any steps the Commission or Independent Observer may add: (a) reviewing the draft RFP and the utility's evaluation of bids, monitoring communications (and communications protocols) with bidders; (b) monitoring adherence to codes of conduct, and monitoring contract negotiations with bidders; (c) assessing the utility's evaluation of affiliate bids, and self-build or other utility-owned facilities; and (d) assessing the utility's evaluation of an appropriate number of other bids. The utility shall provide the Independent Observer with all requested information. Such information may include, without limitation, the utility's evaluation of the unique risks and advantages associated with the utility self-build or other utility-owned facilities, including the regulatory treatment of construction cost variances (both underages and overages) and costs related to equipment performance, contract terms offered to or required of bidders that affect the allocation of risks, and other risks and advantages of utility self-build or other utility-owned projects to consumers. The Independent Observer may validate the criteria used to evaluate affiliate bids and self-build or other utility-owned facilities, and the evaluation of affiliate bids and self-build or other utility-owned facilities. In order to accomplish these tasks, the utility, in conjunction with the Independent Observer, shall propose methods for making fair comparisons (considering both cost and risks) between the utility-owned or self-build facilities and third-party facilities.

9. Where the electric utility is responding to its own RFP, or is accepting bids submitted by its affiliates, the utility will take additional steps to avoid self-dealing in both fact and perception.
 - a. The following tasks shall be completed as a matter of course (i.e., regardless of whether the utility or its affiliate is seeking to advance a resource proposal), including: (i) the utility shall develop all bid evaluation criteria, bid selection guidelines, and the quantitative evaluation models and other information necessary for evaluation of bids prior to issuance of the RFP; (ii) the utility shall establish a website for disseminating information to all bidders at the same time; and (iii) the utility shall develop and follow a Procedures Manual, which describes: (1) the protocols for communicating with bidders, the self-build team, and others; (2) the evaluation process in detail and the methodologies for undertaking the evaluation process; (3) the documentation forms, including logs for any communications with bidders; and (4) other information consistent with the requirements of the solicitation process.
 - b. The following tasks shall be completed whenever the utility or its affiliate is seeking to advance a resource proposal, including: (i) the utility shall submit its self-build option to the Commission one day in advance of receipt of other bids, and provide substantially the same information in its proposal as other bidders; (ii) the utility shall follow the Code of Conduct; and (iii) the utility shall implement appropriate confidentiality agreements prior to the issuance of the RFP to guide the roles and responsibilities of utility personnel.
 - c. The Code of Conduct shall be signed by each utility employee involved either in advancing the self-build project or implementing the competitive bidding process, and shall require that:
 - (i) Whenever staffing and resources permit, the electric utility shall establish internally a separate project team to undertake the evaluation, with no team member having any involvement with the utility self-build option;
 - (ii) During the RFP design and bid evaluation process, there shall be no oral or written contacts between the employees preparing the bid and the electric utility's employees responsible for bid evaluation, other than contacts authorized by the Code of Conduct and the RFP;

- (iii) Throughout the bidding process, the electric utility shall treat all bidders, including its self-build bid and any electric utility affiliate, the same in terms of access to information, time of receipt of information, and response to questions.
 - d. A company officer, identified to the Independent Observer and the Commission, shall have the written authority and obligation to enforce the Code of Conduct. Such officer shall certify, by affidavit, Code of Conduct compliance by all employees after each competitive process ends.
 - e. Further steps may be considered, as appropriate, or ordered by the Commission.
10. Where the utility seeks to advance its proposed facilities (i.e., over those of other developers who may submit bids in its RFP), its proposal must satisfy all the criteria applicable to non-utility bidders, including but not limited to providing all information required by the RFP, and being capable of implementation.
11. Bids submitted by affiliates shall be held to the same contractual and other standards as projects advanced by other bidders.

I. TRANSMISSION INTERCONNECTION AND UPGRADES

- 1. A winning bidder has the right to interconnect its generation to the electric utility's transmission system, and to have that transmission upgraded as necessary to accommodate the output of its generation.
- 2. With respect to procedures and methodologies for:
 - a. Designing interconnections;
 - b. Allocating the cost of interconnections;
 - c. Scheduling and carrying out the physical implementation of interconnections;
 - d. Identifying the need for transmission upgrades;
 - e. Allocating the cost of transmission upgrades; and
 - f. Scheduling and carrying out the physical implementation of transmission upgrades;

the electric utility shall treat all bidders, including its own bid and that of any affiliate, in a comparable manner.

3. Upon the request of a prospective bidder, the electric utility shall provide general information about the possible interconnection and transmission upgrade costs associated with project locations under consideration by the bidder.
4. In a compliance filing to be made within ninety days after issuance of this Framework, the electric utility shall submit a proposed tariff containing procedures for interconnection and transmission upgrades, to ensure comparable treatment among bidders including any electric utility or electric utility affiliate bid. This submission shall contain at least the following elements:
 - a. A formal queuing process that ensures nondiscriminatory, auditable treatment of all requests for interconnection, upgrades and studies thereof;
 - b. A means, if practical, of minimizing the cost of studies by bundling different requests into a single study;
 - c. A methodology for allocating the costs of interconnection and transmission upgrades between the electric utility and the generator; and
 - d. A process for obtaining information on current capacity, operations, maintenance and expansion plans relating to the transmission and distribution systems.
5. To ensure comparable treatment, the Independent Observer shall review and monitor the electric utility's policies, methods and implementation and report to the Commission.

V. DISPUTE RESOLUTION PROCESS

The Commission will serve as an arbiter of last resort, after the utility, Independent Observer, and bidders have attempted to resolve any dispute or pending issue. The Commission will use an informal expedited process to resolve the dispute within thirty (30) days, as described in Part III.B.8. There shall be no right to hearing or appeal from this informal expedited dispute resolution process. The Commission encourages affected parties to seek to work cooperatively to resolve any dispute or pending issue, perhaps with the assistance of an Independent Observer, who may offer to mediate but who has no decision-making authority. The utility and Independent Observer shall conduct informational meetings with the Commission and

Consumer Advocate to keep each apprised of issues that arise between or among the parties.

VI. PARTICIPATION BY THE HOST UTILITY

- A. Where the electric utility is addressing a need for firm capacity in order to address system reliability issues or concerns:
 - 1. In general, the utility shall develop a project proposal that is responsive to the resource need identified in the RFP. The proposal shall represent the utility's best ("self-build" or "utility-owned") response to that need in terms of foreseeable costs and other project characteristics.
 - 2. If the utility opts not to advance its own project (i.e., over those of other developers), the utility shall request and obtain the Commission's approval. In making this request, the utility:
 - a. Shall demonstrate why relying on the market to provide the needed resource is prudent, and such demonstration shall include evidence of the number of viable sellers the utility expects will compete;
 - b. Shall develop a Contingency Plan to respond in a reasonable timeframe if the competitive bidding process unexpectedly fails to produce a viable project proposal; and
 - c. If necessary, shall identify a Parallel Plan that is capable of being implemented, to the extent feasible, after an appropriate amount of planning, which may or may not be the supply-side resource or resources in the Approved IRP.
- B. Where the RFP process has as its focus something other than a reliability-based need, the utility may choose (or decline) to advance its own project proposal either in the form of a self-build or utility-owned project.
- C. If the RFP process results in the selection of non-utility (or third-party) projects to meet a system reliability need or statutory requirement, the utility shall develop and periodically update its Contingency Plan and, if necessary, its Parallel Plan to address the risk that the third-party projects may be delayed or not completed. When submitting the RFP to the Commission, the electric utility shall separately submit, to the extent practical, a description of such activities and a schedule for carrying them out. Such description shall be updated as appropriate.
 - 1. The plans may include the identification of milestones for such projects, and possible steps to be taken if the milestones are not met.

2. Pursuant to the plans, it may be appropriate for the utility to proceed to develop a self-build or utility-owned project or projects until such action can no longer be justified as reasonable. The self-build or utility-owned project(s) may differ from the project(s) advanced by the utility in the RFP process, or the resource(s) identified in its Approved IRP Plan.
 3. The contracts developed for the RFP process to acquire third-party resources shall include commercially reasonable provisions that address delays or non-completion of third-party projects, such as provisions that identify milestones for the projects, seller (i.e., bidder) obligations, and utility remedies if the milestones are not met, and may include provisions to provide the utility with the option to purchase the project under certain circumstances or events of default by the seller (i.e., the bidder).
- D. A utility shall not advance mutually exclusive projects in response to an identified need.

VII. RATEMAKING

- A. The costs that an electric utility reasonably and prudently incurs in designing and administering its competitive bidding processes are recoverable through rates to the extent reasonable and prudent.
- B. The costs that an electric utility incurs in taking reasonable and prudent steps to implement Parallel Plans and Contingency Plans are recoverable through the utility's rates, to the extent reasonable and prudent, as part of the cost of providing reliable service to customers
- C. The reasonable and prudent capital costs that are part of an electric utility's Parallel Plans and Contingency Plans shall be accounted for similar to costs for planning other capital projects (provided that such accounting treatment shall not be determinative of ratemaking treatment):
 1. Such costs would be accumulated as construction work in progress, and carrying costs would accrue on such costs. If the Parallel Plans or Contingency Plans, as implemented, result in the addition of planned resources to the utility system, then the costs incurred and accrued carrying charges would be capitalized as part of the installed resources (i.e., recorded to plant-in-service) and added to rate base. The costs would be depreciated over the life of the resource addition.
 2. If implementation of the Parallel Plans or Contingency Plans is terminated before the resources identified in such plans are placed into service, the costs incurred and accrued carrying charges included in construction work in progress would be transferred to a miscellaneous deferred debit account

and the balance would be amortized to expense over five years (or a reasonable period determined by the Commission), beginning when the base plan resource is placed into service. The amortization expense would be included in the utility's revenue requirement when there is a general rate case. Under appropriate circumstances, the Commission may allow additional carrying costs to accrue on the unamortized miscellaneous deferred balance.

- D. The regulatory treatment of utility-owned or self-build facilities will be cost-based, consistent with traditional cost-of-service ratemaking, wherein prudently incurred capital costs are included in rate base; provided that the evaluation of the utility's bid must account for the possibility that the capital or running costs actually incurred, and recovered from ratepayers, over the plant's lifetime, will vary from the levels assumed in the utility's bid. Any utility-owned project selected pursuant to the RFP process will remain subject to prudence review in a subsequent rate proceeding with respect to the utility's obligation to prudently implement, construct or manage the project consistent with the objective of providing reliable service at the lowest reasonable cost.

VIII. QUALIFYING FACILITIES

- A. For any resource to which the competitive bidding requirement does not apply (due to waiver or exemption), the utility retains its traditional obligation to offer to purchase capacity and energy from a QF at avoided cost upon reasonable terms and conditions approved by the Commission.
- B. For any resource to which the competitive bidding requirement does apply, the utility shall apply to the commission to waive or modify the time periods described in Hawaii Administrative Rules § 6-74-15(c) (1998) for the utility to negotiate with a QF pursuant to the applicable provisions of Hawaii Administrative Rules § 6-74-15(c) (1998), and upon approval of the commission, the utility's obligation to negotiate with a QF shall be deferred pending completion of the competitive bidding process.
 - 1. If a non-QF is the winning bidder:
 - a. A QF will have no PURPA right to supply the resource provided by a non-QF winning bidder.
 - b. If a non-QF winner does not supply all the capacity needed by the utility, or if a need develops between RFPs that will not be satisfied by an RFP due to a waiver or exemption, a QF, upon submitting a viable offer, is permitted to exercise its PURPA rights to sell at avoided cost. The commission's determination of avoided

cost will be bounded by the price level established by the winning non-QF.

2. Where the winning bidder is the utility's self-build option, a QF will not have a PURPA right to supply the resource provided by the utility's self-build option.
3. If a QF is the winning bidder, the QF has the right to sell to the electric utility at its bid price, unless the price is modified in the contract negotiations that are part of the bidding process.

ATTACHMENT B

CONSULTANT'S PERSONNEL AND HOURLY RATES

Consultant's and Subcontractors' Personnel:	Hourly Rate
Barry J. Sheingold, New Energy Opportunities, Inc.	\$250
Donald S. McCauley, McCauley Lyman LLC (counsel)	\$250
Frank Lyman, McCauley Lyman LLC (counsel)	\$250
Richard C. Gross, Richard C. Gross, P.E., Inc.	\$175
Robert C. Grace, Sustainable Energy Advantage LLC	\$210
Jason S. Gifford, Sustainable Energy Advantage LLC	\$145

Consultant shall be entitled to increase the hourly rates set forth above by up to 3.0% per year commencing on September 1, 2008.

Consultant shall have the right to supplement or replace the foregoing personnel with the written approval of Company and without an amendment to the Contract; provided, that such personnel have the requisite expertise and experience for the work to be performed and the hourly rates are reasonable and not in excess of the rates set forth above for comparable work.

If work is done for another client in transit, Consultant will not seek reimbursement from the Company for non-working transit time. If travel time is devoted to working for one or more clients in addition to Company, Consultant will bill the Company only for the proportionate time, if any.

Consultant shall be entitled to compensation for all reasonable, actual out-of-pocket expenses incurred in connection with the Work, including but not limited to reasonable airfare (coach class or equivalent), rental car and other transportation costs, lodging, parking while on business travel, meals while on business travel, telephone (except for telephone calls not specially billed), delivery charges, copying and printing by third parties, and other necessary expenses. Entertainment expenses, luxury hotel accommodations and lavish meals are not appropriate and any billings in excess of reasonable expenses will not be reimbursed. Discounted advance air fares and car rentals are to be obtained if scheduling permits. Use of an automobile other than a rental automobile shall be reimbursed at the rate approved by the Internal Revenue Service.



September 28, 2007

William A. Bonnet
Vice President
Government & Community Affairs

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

PUBLIC UTILITIES
COMMISSION

2007 SEP 28 PM 4:15

FILED

Dear Commissioners:

Subject: Docket Nos. 03-0253 and 03-0372
Integrated Resource Planning and Competitive Bidding

Hawaiian Electric Company, Inc. ("HECO") respectfully submits a copy of its Solicitation of Interest ("SOI") for Non-Firm Renewable Energy Projects, Island of Oahu. (See Attachment.) (By letter dated September 24, 2007 in the subject proceedings, HECO notified the Commission of its intent to issue the SOI by September 28, 2007.¹) The purpose of the SOI is to preliminarily determine the interest of suppliers in responding to a planned Request for Proposal ("RFP") to supply non-firm renewable energy for the island of Oahu, and to obtain background information from potential suppliers.

The objectives of issuing this SOI are as follows:

- Support the timely acquisition of a significant increment of the best as-available renewable energy resources the market can produce on Oahu to meet Renewable Portfolio Standard ("RPS") requirements;²
- Stimulate and expand the prospective bidder market by providing advance notice of a planned RFP issuance;
- Provide adequate time for prospective bidders in the planned RFP to assemble well-developed bids; and

¹ In the same letter, HECO requested Commission approval to proceed with a competitive bidding process to acquire up to approximately 100 MW of non-firm renewable energy for the Island of Oahu, as identified in HECO's IRP-3 2007 Evaluation Report filed on May 31, 2007 in Docket No. 03-0253. HECO will proceed with the planned RFP that is the subject of this SOI only upon receipt of Commission approval. If Commission approval is not received, the planned RFP will not be issued.

² Renewable Portfolio Standard requirements in Hawaii are codified in Sections 269-91 through 269-95, Hawaii Revised Statutes (RPS Law).

- Provide an opportunity for bidders to comment on the anticipated preliminary RFP scope and desired resource characteristics.

Prospective bidders are asked to notify the Company by November 1, 2007 of their interest in responding to the RFP. Interested parties who respond to the SOI by expressing an interest to participate in the proposed competitive procurement process will be notified by the Company upon issuance of the proposed draft RFP later this year.

The proposed draft RFP would be submitted to the Commission for consideration and made available to interested parties for review and comment on or about year-end 2007³, with the final RFP targeted for release by April 2008. The scope of the draft RFP will request bids for a total of approximately 100 MW of non-firm renewable energy, with a desired service date for the resource or resources⁴ in the 2010 to 2012 timeframe.

Sincerely,



Attachment

cc: Division of Consumer Advocacy
Henry Q Curtis
K. Morihara, Esq./R. Ching, Esq.
R. Hee
T. Blume/M. Yamane
W. Bollmeier II

³ Issuance of an RFP by year-end 2007 that is consistent with all of the requirements of the Framework, including a Commission approved code of conduct applicable to bids by the utility or its affiliate, is ambitious. To simplify and expedite the proposed RFP process, it is anticipated that no utility or affiliate bid will be submitted for this non-firm renewable resource RFP.

⁴ A possible outcome of the RFP may be an award of more than one power purchase agreement.



SOLICITATION OF INTEREST

FOR

NON-FIRM RENEWABLE ENERGY

PROJECTS

ISLAND OF OAHU

September 28, 2007



Hawaiian Electric Company, Inc.

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**SOLICITATION OF INTEREST
FOR
NON-FIRM RENEWABLE ENERGY PROJECTS**

Hawaiian Electric Company, Inc.

September 2007

INTRODUCTION

Hawaiian Electric Company, Inc. ("HECO") is a regulated electric public utility engaged in the production, purchase, transmission, distribution and sale of electricity on the island of Oahu, State of Hawaii. HECO hereby issues this Solicitation of Interest ("SOI") for renewable generation projects to supply up to approximately 100 Megawatts ("MW") in aggregate of long-term (i.e. 15-20 years) non-firm renewable energy on the Island of Oahu. The purpose of this SOI is to preliminarily determine the interest in responding to a planned Request for Proposal ("RFP") to supply such non-firm renewable energy and identify and obtain background information from potential suppliers. As provided in HECO's Integrated Resource Planning No. 3 Evaluation Report filed on May 31, 2007 ("IRP-3 Evaluation Report") in Docket No. 03-0253 of the Public Utilities Commission of the State of Hawaii ("Commission"), the objectives of issuing this SOI are as follows:

- Support the timely acquisition of a significant increment of the best as-available renewable energy resources the market can produce on Oahu to meet Renewable Portfolio Standard ("RPS") requirements;¹
- Stimulate and expand the prospective bidder market by providing advance notice of a planned RFP issuance;
- Provide adequate time for prospective bidders in the planned RFP to assemble well-developed bids; and
- An opportunity for bidders to comment on the anticipated preliminary RFP scope and desired resource characteristics

The requirements of competitive bidding for acquiring a future energy generation resource or a block of generation resources by an electric utility in Hawaii are set forth in the Framework for Competitive Bidding dated December 8, 2006 (the "Framework"), adopted by the Commission in Decision and Order No. 23121.² Section II.C.3 of the Framework states in relevant part that: "A determination will be made by the Commission in an IRP proceeding as to whether a competitive bidding process shall be used to acquire a generation resource or a block of generation resources that

¹ Renewable Portfolio Standard requirements in Hawaii are codified in Sections 269-91 through 269-95, Hawaii Revised Statutes (the "RPS" Law). See Appendix D.

² Docket No. 03-0372, Public Utilities Commission of the State of Hawaii.

is included in the IRP.”

In Section 4.2.5 of HECO’s IRP-3 Evaluation Report, HECO identified its intent to issue a SOI and a subsequent RFP for up to approximately 100 MW of non-firm renewable energy and acknowledged the need to obtain the approval of the Commission to proceed with issuance of the RFP. The Commission, however, has not yet had the opportunity to make a determination as to whether a competitive bidding process should be used to acquire this proposed block of up to approximately 100 MW of non-firm renewable generation. Accordingly, on September 24, 2007, HECO submitted a request for Commission approval to proceed with a competitive bidding process by issuing an RFP to acquire up to approximately 100 MW of non-firm renewable generation for the Island of Oahu. **The request for approval is presently under Commission review for determination. HECO will proceed with the planned RFP that is the subject of this SOI only upon receipt of Commission approval. If Commission approval is not received, the planned RFP will not be issued.** HECO does not know when the Commission will render a decision on the request to proceed with the proposed RFP.³

The anticipated draft RFP to follow this SOI would be submitted to the Commission for consideration and made available to interested parties for review and comment on or about year-end 2007 with the final RFP targeted for release by April 2008. The proposed RFP will request bids for a total of approximately 100 MW of non-firm renewable energy, with a desired in-service date for the resource or resources⁴ totaling up to 100 MW in the 2010 to 2012 timeframe. HECO understands, however, that resource development can take an extended period of time and anticipates that it may consider resource proposals submitted in response to the planned RFP that can achieve commercial operation as late as the 2014 timeframe. The purpose of issuing the RFP now is to accelerate to the extent possible the addition of renewable energy resources on Oahu, while proceeding in a systematic manner that takes into account the existing infrastructure and mix of generation on the system and the ability of the system to absorb non-firm or intermittent energy resources while maintaining system reliability.

³ In Decision and Order No. 23121 (Docket No. 03-0372), the Commission also required HECO to prepare and submit for Commission approval the following three items as further described in the Framework prior to the commencement of any competitive bid for the acquisition of any future energy resource: (1) a final list of qualified candidates for the role of Independent Observer – the neutral person or entity retained by the electric utility to monitor the utility’s competitive bidding process, and to advise the utility and Commission on matters arising out of the competitive bidding process as described in the Framework; (2) a proposed Code of Conduct – a written code developed by the host electric utility and approved by the Commission to ensure the fairness and integrity of the competitive bidding process; and (3) a proposed tariff containing procedures for interconnection and transmission upgrades to ensure comparable treatment among bidders – to include among other elements a methodology for allocating costs of interconnection and transmission upgrades between the electric utility and the generator, and a process for obtaining information on current capacity, operations, maintenance and expansion plans relating to the transmission and distribution systems. The Commission approved HECO’s proposed list of qualified candidates for the role of Independent Observer in June, 2007, and the proposed Code of Conduct in August, 2007. The proposed tariff for interconnection and transmission upgrades filed with the Commission in April, 2007, is pending Commission approval. HECO does not know when the Commission will render a determination on the proposed tariff. The proposed RFP that is the subject of this SOI will not be issued until such tariff is approved.

⁴ A possible outcome of the RFP may be an award of more than one power purchase agreement.

To simplify and expedite the proposed RFP process, no HECO or HECO affiliate bid will be submitted for the planned non-firm renewable resource RFP. The Framework requires the participation of an Independent Observer – a neutral person or entity retained by the electric utility to monitor the utility’s competitive bidding process and to advise the utility and Commission on matters arising there from – only in a competitive bid that the utility or its affiliate participates in as a bidder. Nonetheless, HECO proposes to retain the services of an Independent Observer to provide valuable advice and guidance on the competitive bidding processes that are utilized, including HECO’s treatment of all bidders the same in terms of access to information, time of receipt of information, and response to questions.⁵ Accordingly, HECO submitted for Commission approval on September 25, 2007, a contract by and between HECO and New Energy Opportunities, Inc. for the services of an Independent Observer. Commission approval of the contract is pending.

Interested parties who respond to this SOI by expressing interest to participate in the proposed competitive procurement process will be notified by the Company upon issuance of the Draft RFP later this year. All information provided by interested parties that is not in the public domain and considered confidential information in response to this SOI and the planned RFP will be treated confidentially by HECO unless responders request otherwise. Please note, however, that information received in response to this SOI and eventual RFP may also be made available for review by an Independent Observer, the Commission, and Consumer Advocate under an appropriate Protective Order.

A. PRELIMINARY SCOPE OF THE PROPOSED RFP

The preliminary scope of the proposed RFP is for a total of approximately 100 MW of non-firm renewable generation. The anticipated RFP will be for supply-side resources only. Demand-side resources will not be eligible to participate in this RFP in accordance with the Framework.

The proposed scope takes into account (1) the expectation that up to 60 MW of non-firm renewable energy may be acquired on the HECO system through power purchase agreements with developers of proposed projects that are exempt from the Framework (hereafter referred to as “grandfathered proposals”), (2) the infrastructure available to bring these resources on-line in a timely manner (i.e., the amount of additional non-firm energy that can be accepted without significant, time-consuming transmission or sub-transmission system improvements), (3) operational and reliability issues associated with incorporating relatively large amounts of intermittent non-dispatchable generation into our system, (4) the need to prudently manage the acquisition of these non-firm intermittent resources in an incremental manner to gain critical operational experience and pending further system analyses, so as not to inadvertently foreclose future opportunities to add more renewable resources, and (5) the desire to follow a responsible and systematic approach toward meeting HECO’s RPS requirement.

On Oahu, HECO is continuing discussions with developers of certain “grandfathered proposals” (as designated by the PUC) pursuant to exemptions from the Framework for certain offers to sell energy

⁵ Section IV.H.2. of the Framework.

and/or capacity by non-fossil fuel producers submitted before adoption of the Framework.⁶ It is anticipated that the process could result in power purchase agreements for up to a total of approximately 60 MW of non-firm renewable energy. Accordingly, the amount of non-firm renewable generation ultimately awarded in the proposed RFP process could potentially be impacted by successful completion of power purchase agreements with the grandfathered proposals, but is not expected to eliminate the RFP. HECO plans to provide updates to prospective bidders with regard to any change in the renewable energy to be sought in the proposed RFP based on the progress of discussions with developers of grandfathered proposals.

In parallel with these efforts and the proposed RFP, HECO also continues to make progress toward installation of a 110 MW biofuel-fired simple-cycle combustion turbine generator in Campbell Industrial Park. The City and County of Honolulu has also issued a request for competitive sealed proposals to construct and operate an alternative energy facility and/or to improve and continue to operate the H-POWER facility. It is reported that the City expects to award a contract(s) by January, 2008.

It is anticipated that the proposed RFP will ask bidders to provide a base proposal for their project that will provide up to 100 MW of non-firm renewable energy and may also allow bidders to submit alternate proposals for larger or additional phased increments of non-firm renewable energy if they choose to do so. All properly submitted proposals will be accepted and evaluated. A more detailed technical analysis will be conducted based on the types of proposals received, taking into account the status of the grandfathered proposals and other activities occurring in parallel to the proposed RFP process, to determine the optimum amount of non-firm renewable energy that will be selected and awarded through the proposed RFP process.

HECO recognizes that the acquisition of a second block of renewable energy is likely to be a desired objective of the HECO IRP-4 planning process presently underway. To not foreclose the ability of the HECO system to take on more renewable energy later, relatively strict operating performance standards will be required from those non-firm renewable energy resources presently being sought both through the ongoing IPP negotiations and the planned RFP. Analyses to determine the required attributes of the renewable energy resources and necessary standards of performance are in progress.

In accordance with Section IV.B.6 of the Framework, the process leading to the distribution of the RFP is proposed to include the following steps:

- a. HECO designs a draft RFP, then files its draft RFP and supporting documentation with the Commission;
- b. HECO holds a technical conference to discuss the draft RFP with interested parties, including potential bidders;
- c. Interested parties submit comments on the draft RFP to HECO and the Commission;

⁶ HECO has completed its assessment of each of these grandfathered proposals and has advised the project developers of the next steps. It is anticipated that proposals that are moving forward in parallel to the competitive bidding process will be targeting successful negotiations of a Purchase Power Agreement by September 2008.

- d. HECO determines whether and how to incorporate recommendations from interested parties in the draft RFP;
- e. HECO submits its final, proposed RFP to the Commission for its review and approval (and modification if necessary);
- f. The Independent Observer submits comments and recommendations to the Commission concerning the RFP and all attachments, simultaneously with HECO's proposed RFP; and
- g. HECO can issue the RFP if the Commission does not direct HECO to do otherwise within 30 days after the Commission receives the proposed RFP and the Independent Observer's comments and recommendations.

B. ANTICIPATED CHARACTERISTICS OF THE RESOURCES DESIRED

The planned RFP to be issued by HECO will identify the desired attributes of the non-firm renewable energy resources and necessary standards of performance. While HECO has gained experience with integrating non-firm renewable energy resources, in particular intermittent wind resources, at its subsidiaries,⁷ HELCO and MECO, HECO has learned that integrating such generation onto a small isolated island grid presents many challenges in operating the system and maintaining system stability. Some of the challenges that will affect the desired performance standards and characteristics of the projects are expected to include among others:

- System stability – ensuring the system will not experience blackouts following line faults and generation loss with high intermittent or dispatch limited resource penetration.
- Optimizing unit scheduling - requires accurate hour-ahead and day-ahead forecast, not readily available from intermittent resources.
- Frequency Control – variations in the output of intermittent resources can cause variations in system frequency. If frequency deviations become too large, the system is less stable and can lead to short customer outages (under frequency load shed) or extensive outages (if the deviation leads to system failure).
- Voltage Control – variations in the output of intermittent resources may cause variations in system voltage. Low voltage may result in customer equipment being damaged. If voltage deviations become too large, the system is less stable and can lead to short customer outages (under voltage load shed) or extensive outages (if the deviation leads to system failure).
- System Management – standard Energy Management Systems (EMS) are not configured to work with high wind penetration. They must be “tuned” to account for the variable output of

⁷ Hawaii Electric Light Company, Inc. (“HELCO”) and Maui Electric Company, Limited (“MECO”) operate on the island of Hawaii and the islands of Maui, Lanai and Molokai, respectively.

wind farms and direct the rest of the system to respond to those fluctuations. If the EMS is not tuned properly it could worsen the fluctuations.

- Cost and emissions related to provide additional regulating reserve – providing the regulating reserve to account for the irregular nature of intermittent resources can require the commitment of additional regulating units and require the regulating units to operate at reduced fuel efficiency which increases both costs and emissions for those units. Constant regulation to counter the intermittent variations also increases the wear and tear on the regulating units.

In addition to the general issues related to high levels of intermittent resource penetration, Hawaii faces a unique set of challenges to integrating such resources onto its grids. These include having no interconnections to other grids for support, little geographic diversity, and a unique mix of generation resources. HECO is currently researching how other utilities with relatively small isolated systems and a comparable generation resource mix are striving to deal with the operational challenges, such as maintaining stable frequency and voltages, of increased penetration of intermittent resources. However, the HECO utilities (HELCO and MECO) are presently among the leaders internationally in terms of the large penetration of wind energy already integrated on its grids. Thus, an available source of useful data from other systems is fairly limited, particularly from other small isolated electrical systems that are most directly comparable.

Nevertheless, work continues on the analyses that have been identified in the Integrated Resource Plan filings for HECO, HELCO and MECO to evaluate the impact of intermittent renewable energy resources (such as wind farms) on the Companies' systems,⁸ and renewable energy infrastructure projects identified as part of the Companies' proposed Renewable Energy Infrastructure Program in the RPS Framework Docket No. 2007-0008 that are intended to assist in the integration of more as-available and other non-dispatchable renewable projects onto the electrical grid than could otherwise be added without such projects.⁹ To effectively maximize the amount of as-available renewable resources that can be integrated into the Oahu system, HECO must address the challenges that as-available resources present and facilitate its integration in a manner that balances the need to maintain reliable operation and customer expectations for power quality.

⁸ For example, HECO, HELCO and MECO currently are collaborating with the Hawaii Natural Energy Institute and GE Energy on a Department of Energy funded project called the Hawaii Energy Roadmap. The primary objective of the project is to develop and execute an unbiased energy scenario analysis that addresses the future energy interests of the Big Island and initiates further study of a technology-specific project that serves as another step on a path toward meeting the island's energy objectives. This is an ambitious and technically challenging study that in some cases will require assumptions to fill in gaps where data or information is currently not available. Therefore, care will need to be taken in evaluating the results. It is hoped that these research and study efforts will help to better understand and quantify the effects of integrating intermittent resources onto the relatively small electrical grids in Hawaii and help to chart a clearer course to achieve increased penetration of renewable resources into the systems without sacrificing reliability or power quality.

⁹ For example, many renewable projects, by their very nature, provide power on a variable basis, thus requiring offsetting firm generation as backup. Hawaii's island electric systems have difficulty accepting renewable generation during minimum load periods. Systems such as battery storage and pumped hydroelectric storage facilities allow a utility to accept and accommodate more as-available renewable energy.

A preliminary list of the anticipated characteristics of the renewable energy resources sought in the proposed RFP is provided below. This preliminary list should not be considered all inclusive, but is provided for information only to assist interested parties at this time:

- Any projects that result from the planned RFP must be able to apply toward HECO's RPS and may also be credited towards the Company's efforts to reduce greenhouse gas emissions. Under the RPS law, supply-side resources eligible to meet RPS requirements includes renewable energy generated or produced by the following sources:
 - Wind
 - Sun
 - Falling water
 - Biogas including landfill and sewage-based digester gas
 - Geothermal
 - Ocean water, currents and waves
 - Biomass
 - Biofuels
 - Hydrogen from renewables
- The resources in the base proposal should have an aggregate nameplate instantaneous output capability of no less than 5 MW and no more than 100 MW, as provided by a single generator or multiple generators. In addition to their base proposal, bidders may also submit for consideration alternate proposals for larger (more than 100 MW) or additional phased increments of non-firm renewable energy if they choose to do so.
- The resources should provide non-firm or firm energy¹⁰. HECO is not seeking to contract for firm capacity in this RFP. Generally, electrical energy production from non-firm resources is often dependent upon the inherent nature of the technology and its dependency on natural variations in environmental conditions, such as intermittent and variable wind flow, water flow, or solar intensity. Examples of non-firm resources include, but are not limited to, wind turbines, run-of-river hydroelectric turbines, and photovoltaic systems.
- The resources should be equipped with means to moderate or mitigate power output fluctuations to meet performance standards that will be determined by the utility. Examples of such performance standards may include without limitation maximum ramp rates up and down, maximum voltage variations, and maximum power fluctuation rates.
- The resources should also be equipped with means to meet other performance standards to help maintain grid stability and reliability. Examples of such performance standards

¹⁰ Resources which have characteristics that enables it to provide schedulable or dispatchable energy.

may include without limitation generator under- and overfrequency ride-through, under- and overvoltage ride-through, and reactive power control.

- Ideally, the resources should have some means of forecasting day-ahead (and possibly shorter time interval) hourly output to facilitate the scheduling of firm capacity operations.
- The resources and technology employed should be demonstrated and proven commercially available¹¹.

It is anticipated that interested bidders will be responsible for project site acquisition and all project related permitting. The proposed RFP will also describe and distinguish between the minimum or "threshold" criteria that all bids must meet to qualify for further consideration, as well as the desirable or "evaluation" criteria. For example, it is envisioned that day-ahead or other interval forecasting of output will be an evaluation criteria, but not a threshold criteria. Threshold and evaluation criteria, both price and non-price, will be defined in the proposed RFP.

C. INFORMATION ON TRANSMISSION CONSTRAINTS ASSOCIATED WITH LIKELY AREAS OF INTERCONNECTION

HECO System

With respect to the consideration of available transmission facilities and infrastructure, in order for this initial proposed increment of non-firm renewable generation to be brought into our system in a timely manner, it would have to be done with minimal infrastructure improvements. Increments of generation that are too large will trigger a need for improvements to the existing transmission infrastructure which will undoubtedly result in extensive lead times for permitting and construction of new transmission lines. Designating this initial increment to be able to be supported within the existing infrastructure promotes a more timely acquisition process.

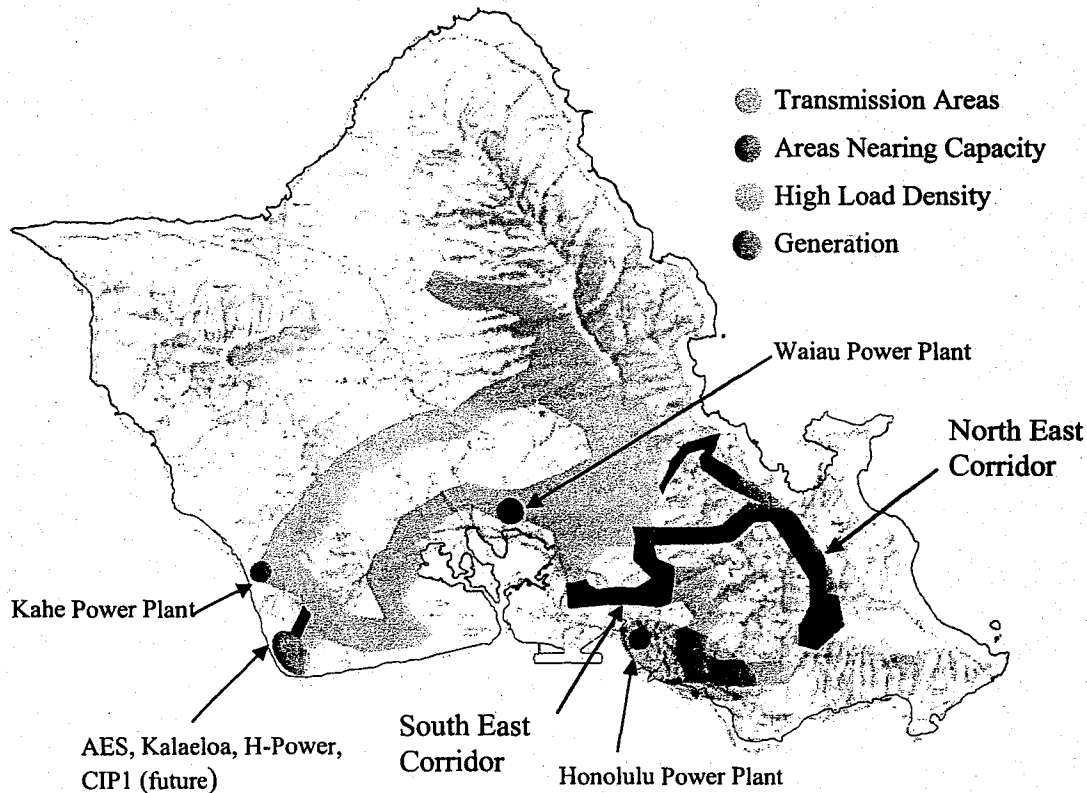
The impacts of each proposal on transmission costs and access will be assessed as part of the bid evaluation process. Thus, HECO's objective is to provide information on its transmission system to interested parties to allow prospective bidders to begin developing their proposal concept as soon as is reasonable. Prospective bidders are invited to offer solutions to meet HECO's stated objectives.

¹¹ Please note that separate from this procurement effort, HECO is considering the integration of emerging renewable energy technologies, such as wave energy, into the grid. As stated in HECO's IRP-3 Evaluation Report, the Company has envisioned the potential for a "set-aside" for up to 20 MW of non-firm energy from emerging renewable technologies. HECO is developing a separate procurement strategy for these emerging renewable energy resources. A procurement strategy will be the subject of analysis in HECO IRP-4.

Figure 1 below is an island map showing the general locations of:

- System generating stations
- 138kV transmission corridors
- High Load Density Area
- Areas Nearing Their Capacity Limits per the HECO Planning Criteria

Figure 1 - HECO Generation and 138 kV Transmission System



Existing HECO and Independent Power Producer (“IPP”) Generation

Existing HECO generation is located in the west at the Kahe Power Plant, and centrally at the Waiau and Honolulu Power Plants. Existing IPP generation is located in the west in the Campbell Industrial Park (“CIP”) at AES, Kalaeloa, and Honolulu Resource Recovery Venture (“H-Power”). It should also be noted that HECO has received approval for and is in the process of installing a nominal 100 MW combustion turbine generator (CT-1) at its Campbell Industrial Park Generating Station. Each generating station is connected directly to the 138 kV transmission system with the exception of Honolulu Power Plant which exports its power via HECO’s 46 kV downtown system.

Existing HECO and IPP Generation Capability

A list of each generating facility connected to the HECO system along with the mode of operation and total generating capacity is summarized below.

HECO System (Est. as-of 6/30/07)

Unit	Operating Mode	Normal Capability (Net MW)
Kahe 1	Baseload	88.2
Kahe 2	Baseload	86.3
Kahe 3	Baseload	88.2
Kahe 4	Baseload	89.2
Kahe 5	Baseload	134.7
Kahe 6	Baseload	133.9
Waiau 7	Baseload	88.1
Waiau 8	Baseload	88.1
Baseload Units:		796.7
Honolulu 8	Cycling	52.9
Honolulu 9	Cycling	54.4
Waiau 3	Cycling	46.2
Waiau 4	Cycling	46.4
Waiau 5	Cycling	54.6
Waiau 6	Cycling	55.6
Cycling Units:		310.1
Waiau 9	Peaking	51.9
Waiau 10	Peaking	49.9
Peaking Units:		101.8
HECO-sited Distributed Generation:		29.5
HECO Generation		1238.1
H-POWER		46.0
Kalaeloa Partners, L.P.		208.0
AES Hawaii		180.0
Total Generation:		1672.1

Existing 138 KV Transmission System

The purpose of a transmission system is to deliver generated power to the sub-transmission and distribution systems and ultimately to the customer at the lowest reasonable cost. Implicit in this is

the need to strike a reasonable balance among cost, reliability, and sensitivity to the environment. Among the transmission considerations that impact generation resource planning are:

- Adequacy of transmission capacity
- Reliability considerations of the transmission system
- System transmission losses
- Voltage support
- System stability
- Ability to successfully site and permit transmission infrastructure in a timely manner.

Bulk power generated from the power plants located in the Kahe and CIP area is transmitted to the East Oahu Service Area over two major 138 kV transmission corridors. The Northern Transmission Corridor extends from Kahe Power Plant to the Halawa Valley, Kaneohe, and the Palolo Valley, where it currently ends. The Southern Transmission Corridor extends from the Kahe Power Plant to the Waiiau Power Plant and substations near downtown Honolulu near Iwilei, School Street, and Archer Lane. The Southern Transmission Corridor was recently extended to Kamoku Street through the installation of two underground 138 kV transmission lines from Archer Lane to Kona Street and the installation of an underground 138 kV transmission line from Kona Street to Kamoku Street, where it currently ends.

In West Oahu and Central Oahu, the two corridors are linked together by transmission lines between power plants and substations connected to the Northern and Southern Corridors. However, no similar connection exists in the East Oahu Service Area.

There is very limited 138 kV transmission infrastructure serving the northern and coastal areas of the island.

The normal flow of power is from the Kahe and CIP areas eastward toward the Honolulu load center via four 138 kV transmission lines in the Northern Transmission Corridor and via two 138 kV transmission lines in the Southern Transmission Corridor.

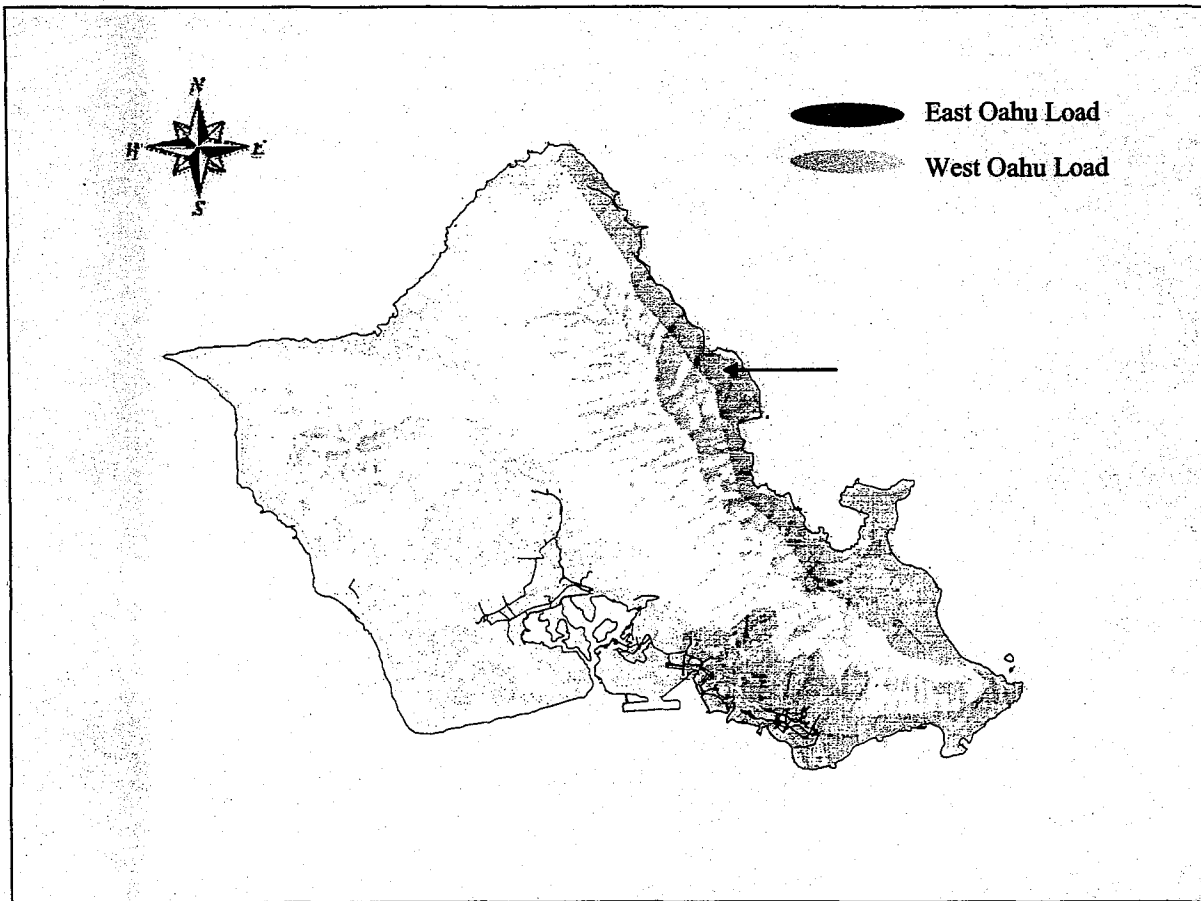
HECO's Transmission Planning Criteria is attached as Appendix A.

Load Distribution

Figure 2 below shows the general locations of HECO's 46 kV subtransmission system and the general load areas. The blue shaded areas make up the majority (approximately 56%) of HECO's total system load, most of which is concentrated on the east side of the island.

Loads located in the north and in the coastal areas of the island are served by HECO's 46 kV subtransmission system which has a much lower power flow capability compared to the 138 kV transmission system.

Figure 2 - HECO Load Distribution



Known Transmission Constraints

CIP 138 kV Transmission

Presently, there are two 138 kV transmission lines responsible for exporting the power generated in the CIP area to the remainder of the system. Generating unit(s) proposed in the CIP area could place these two transmission lines at risk for overloads depending upon the size and type of the proposed generating unit(s).

With the Commission's recent approval in 2007 of a new nominal 110 MW combustion turbine in the CIP area scheduled for service in mid-2009, the Commission also approved the addition of a new 138 kV transmission line. Installation of the new line is scheduled for completion in early 2009 and engineering activities are presently underway. The new line will provide an added path of power export from the CIP area thereby increasing the reliability of the transmission system and preventing projected overloads on the two existing 138 kV transmission lines that presently export power from the area. The addition of the new transmission line will also enable the CIP area to accommodate the addition of roughly 100 MW of generation in the CIP area beyond the new combustion turbine planned for service in 2009. A more detailed technical assessment of the

transmission system capacity to export power from the CIP area would need to be completed in the course of the proposal evaluation process as part of an Interconnection Requirements Study. Further generation growth in the CIP area will require a re-evaluation of the transmission system and related infrastructure to determine if additional changes are required.

Honolulu Power Plant 46 kV Subtransmission

The 46 kV subtransmission lines that export power from the Honolulu Power Plant are presently at their capacity limit.

South Eastern Transmission Corridor

Presently, there are three 138 kV transmission lines that provide power to the Honolulu and Downtown areas via the Iwilei, School Street, Archer, Kewalo, and Kamoku Substations. Whenever one of these lines is out of service for repair or maintenance, and a second line experiences an unplanned outage, power flow on the remaining line can approach the line's capacity.

North Eastern Transmission Corridor

Presently, there are three 138 kV transmission lines feeding power to the Koolau Substation from the transmission system. Whenever one of these lines is out of service for repair or maintenance, and a second line experiences an unplanned outage, power flow on the remaining line can approach the line's capacity.

The Pukele Substation is fed power from the 138 kV transmission system via two transmission lines emanating from the Koolau Substation. Whenever one of these lines is out of service for repair or maintenance, the entire Pukele Substation is at risk of losing power should the remaining line experience an unplanned outage.

East Oahu Transmission Project

HECO transmits bulk power to the East Oahu Service Area over two major transmission corridors (Northern and Southern). The East Oahu Transmission Project ("EOTP") replaces an earlier proposal which called for a partial underground / partial overhead 138 kV line from the Kamoku Substation to the Pukele Substation in order to close the gap between the eastern end of the Southern and Northern corridors and provide a third transmission line to the Pukele Substation.

The revised EOTP is a two-phased project and uses the 46 kV subtransmission system by allowing load to be shifted between the North Eastern and South Eastern Substations to alleviate loading problems on the 138 kV system; however, it is not as robust as the original 138kV option. HECO is still awaiting final PUC approval for EOTP. The first phase is currently projected to be completed in 2009, subject to the timing of PUC approval, and the completion date of the second phase is being evaluated.

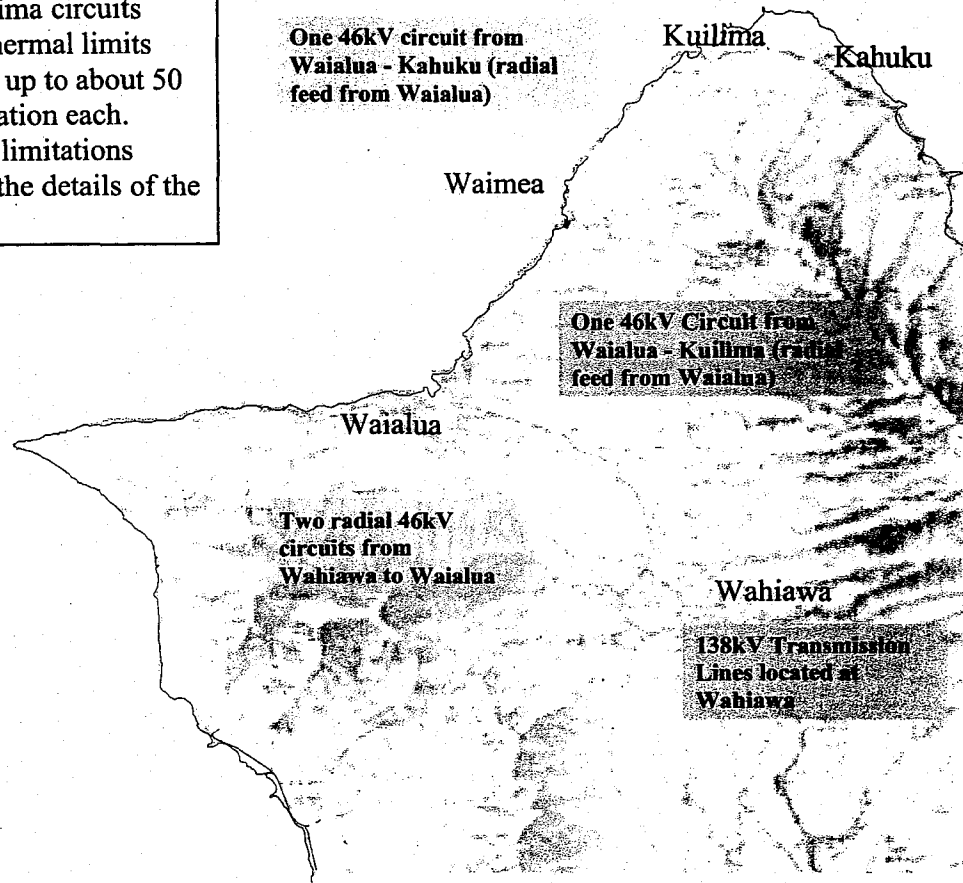
High Level Review of Potential Generation Sites

A high level review of the island of Oahu identifies two likely areas for potential generation sites. The north shore has been identified as a location with exceptional wind resources. Wind projects have been constructed there in the past and current interest has been expressed for wind development in that area.

Figure 3 describes the existing 46 kV facilities in the area and how they tie back to the 138 kV transmission system in Wahiawa. A preliminary review of the existing 46 kV radial circuits in the area from Waialua Substation to Kuilima Substation and Kahuku Substation indicates that the thermal limits of each of the two 46 kV circuits may support roughly up to about 50 MW of generation each. However, this does not take into account the output variation of any intermittent resource added in the region which may lower the limit of the allowable generation. Moreover, both of the existing 46 kV circuits in the region are radial in their present configuration and therefore any generation connected to them will be lost when the circuit trips unexpectedly or requires maintenance. Other limitations will also need to be reviewed based on the details of the proposals for development. A more detailed technical assessment of these limitations would be done in the course of the proposal evaluation process as part of an Interconnection Requirements Study.

Figure 3 - North Shore Radial 46 kV circuits

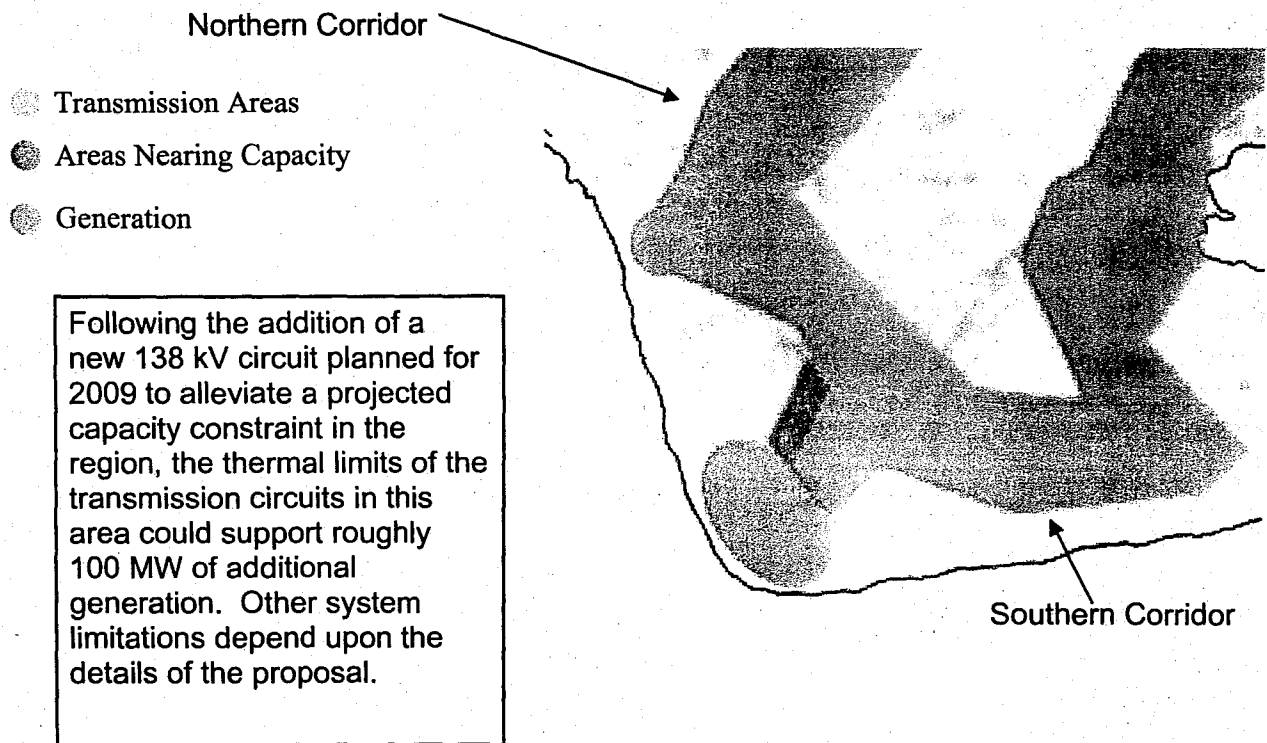
The Waialua-Kahuku and Waialua-Kuilima circuits steady state thermal limits could support up to about 50 MW of generation each. Other system limitations depend upon the details of the proposal.



The other potential area on Oahu for new generation is in the Kahe and CIP region. The Kahe area has been identified as a location with exceptional wind and other renewable resources.

Figure 4 shows the transmission system in the Kahe and CIP areas with a southern and northern corridor exporting power from the region. A preliminary review of the thermal limits of the 138 kV circuits in the area indicates that they could support roughly 100 MW of additional generation after the new transmission line and planned combustion turbine addition in the CIP area is completed as scheduled in 2009. Other limitations will need to be reviewed based on the details of the proposals for development. Again, a more detailed technical assessment of these limitations would be done in the course of the proposal evaluation process as part of an Interconnection Requirements Study.

Figure 4 – Kahe / CEIP Area



D. ANTICIPATED COMPETITIVE BIDDING MILESTONES AND SCHEDULE

The following preliminary schedule roughly identifies key milestone dates for the proposed RFP consistent with the competitive bidding process requirements outlined in the Framework. All milestone dates provided below are preliminary and subject to change.

Interested parties should take special notice that HECO proposes to issue a draft RFP in late December for review and comment. Interested parties are encouraged to review and submit comments on the draft RFP and its provisions to assist HECO in its objective to develop a fair and equitable process for all prospective bidders that is designed to achieve both economic and non-economic value for customers.

Milestone	Preliminary Schedule
Issue Solicitation of Interest (SOI)	Sept 2007
Receive Responses to SOI	Nov 2007
Compile RFP Mailing List	Nov 2007
Issue Draft RFP and Contract Forms	Dec 2007
Technical Conference on RFP with Interested Parties	Jan 2008
Address Comments and File Proposed RFP and Contract Forms with the Commission	Mar 2008
Independent Observer Submits Comments on Proposed RFP and Contract Documents	Mar 2008
Commission Review and Approval of Final RFP and Contract Forms, RFP Issued	April 2008
Bidders Conference	May 2008
Bidders Prepare Proposals	May-Jul 2008
Proposals Received	Jul 2008
Determine short list of bids	Aug - Oct 2008
Determine any interconnection facilities and transmission upgrades to accommodate short list bids	Oct 2008 – Jan 2009
Select winning bids	Apr 2009
Begin contract negotiations	Apr 2009
Submit PPA contracts for PUC approval	TBD
PUC approval	TBD
Desired Commercial Operation of Project(s)	2010 – 2012/2014

As noted in the schedule and consistent with HECO's proposed tariff for interconnection and transmission upgrades, HECO proposes to undertake a detailed interconnection requirements study for the project proposals (at bidders expense) of all short-listed bidders to detailed interconnection requirements and assess the expected cost for interconnecting the specific project to the HECO system. See Appendix C for more information on Renewable Energy RFP Interconnection.

E. NOTICE OF INTEREST

While HECO intends to develop a separate website which will contain all relevant information associated with the SOI and Draft RFP, prospective bidders are nevertheless strongly urged to submit the attached Notice of Interest (Appendix B) to ensure receipt of a copy of the Draft RFP upon issuance and to facilitate communications with prospective bidders. Please complete all requested information, if available, and submit as instructed on the form. All forms should be received no later than **November 1, 2007** to ensure receiving notice of the issuance of the Draft RFP.

F. REQUESTS FOR INFORMATION

The purpose of this SOI is to preliminarily determine the interest in responding to a planned Request for Proposal ("RFP") to supply such non-firm renewable energy and identify and obtain background information from potential suppliers. Further detailed information on the scope of the non-firm renewable resources to be solicited, bidding instructions, standard contract form, and other pertinent information will be provided in the Draft RFP targeted for release in December 2007 subject to approval by the Commission.

Interested Parties may submit information requests if necessary to help determine their level of interest in participating in the planned RFP process. Information requests may be submitted to HECO's Generation Bidding Division via a link provided on HECO's website (www.heco.com). All information requests received will be reviewed by HECO and responses will be made available to all parties via HECO's website after review by the Independent Observer. Confidential data provided in response to any questions will only be provided upon execution of a Non-Disclosure Agreement. The Non-Disclosure Agreement form will also be made available on HECO's website.

APPENDIX A

HECO Transmission Planning Criteria

The most relevant transmission planning criteria, #1 through #7 are shown below:

1. With any generating unit off for overhaul, no transmission system component loading will exceed its NORMAL rating, nor will voltage levels violate their upper or lower limits for any of the following outages:
 - a. Any other generating unit.
 - b. Any transmission circuit.
 - c. Any transmission transformer.
 - d. Any transmission bus.
 2. With any generating unit off for overhaul, no transmission system component will exceed its EMERGENCY rating, nor will voltage levels violate their upper or lower limits for any multiple transmission circuit outage caused by a line down at a crossing point.
 3. With any generating unit off for overhaul, and any transmission line out of service for maintenance, no transmission system component will exceed its EMERGENCY rating, nor will voltage levels violate their upper or lower limits for any of the following outages:
 - a. Any other generating unit.
 - b. Any other transmission circuit.
 - c. Any multiple transmission circuit outages caused by a line down at a crossing point.
 - d. Any transmission transformer.
 - e. Any transmission bus.
- NOTE:** The purpose of criterion 3 is to help assure that the system will survive. All loads may not continue to be served, but those that do will not cause any transmission system component to exceed its EMERGENCY rating, or any voltage level to violate its upper or lower limits. Manual intervention will not be required to meet these conditions.
4. Each single generating station should be able to export power equal to the sum of the individual generating unit NORMAL capability ratings in MW at 105 percent of rated generator field current with no transmission system component loading exceeding its EMERGENCY rating, nor will voltage levels violate their upper or lower limits for any of the following outages:
 - a. Any transmission circuit.
 - b. Any multiple transmission circuit outages caused by a line down at a crossing point.
 - c. Any transmission transformer.
 - d. Any transmission bus.
 5. Each individual generating station should be able to export all the real and reactive power that it can generate. For this criterion, this is measured by summing all the individual generating unit EMERGENCY capability ratings in MW and assuming 110 percent of rated generator field

current. It is further assumed that all transmission lines and associated transmission equipment are in service.

6. Intentionally omitted.

7. Two 138 kV transmission circuits on common steel poles can be taken out of service at the same time for maintenance. This is a maintenance requirement based on present maintenance practices.

**APPENDIX B
NOTICE OF INTEREST
(CONFIDENTIAL)**

1 Company Name: _____

2 Contact Person Information:

Name	
Title/Position	
Mailing Address	
Courier Address (if different)	
Telephone Number	
Fax Number	
E-mail Address	

3 Type of Project or Bid Expected to be Proposed: _____

4 Location, Size (MW) and Interconnection Point of Project (if available): _____

5 Name: _____

Title: _____ Date: _____

This Notice of Interest may be submitted electronically to HECO's Generation Bidding Division at genbid@heco.com or mailed to the Director of Generation Bidding (MS-WA4/XB), at Hawaiian Electric Company, P.O. Box 2750, Honolulu, Hawaii 96840. Receipt of the Notice of Interest will be confirmed in an e-mail from Hawaiian Electric to the Bidder.

This form should be delivered to the above address on or before November 1, 2007.

APPENDIX C Renewable Energy RFP Interconnection

HECO submitted its proposed Rule 19 establishing tariff provisions for Interconnection and Transmission Upgrades as part of its implementation of competitive bidding on April 17, 2007, and the proposed rule is pending PUC approval. The proposed tariff provisions are intended to simplify the "rules" regarding who pays for, installs, owns and operates interconnection facilities in the context of competitive bidding. Under the proposed rule:

1. All bids which pass the threshold screening in the RFP process will undergo a high level evaluation consistent with the requirements identified in the RFP, which will focus primarily on basic steady-state analyses. For each bid, a high level estimate of the costs of Interconnection Facilities and required System Upgrades will be developed based solely on the high level evaluation and on unitized cost estimates.
2. A full Interconnection Requirements Study ("IRS") will be performed only for bid(s) that have met the RFP requirements, passed the threshold criteria, and made the short list, or as otherwise specified in the RFP. The results of the IRS, including identified Interconnection Facilities, System Upgrades, Point of Interconnection, and Grid Connection Point, will be provided to the bidder.
3. "Interconnection Facilities" include facilities needed for connection to the grid (i.e., the transmission system or subtransmission system), and include facilities up to the Grid Interconnection Point and certain ancillary transmission system facilities such as relays, breakers, communication system facilities, etc. The "Grid Interconnection Point" is the point at which the Interconnection Facilities connect to the grid, and will be identified in the IRS.
4. Successful bidders will pay for, install, own and maintain the Interconnection Facilities up to the Point of Interconnection. The "Point of Interconnection" is the point at which ownership of the facilities change from those facilities owned and maintained by the Generating Facility to those facilities owned and maintained by the Company. The Point of Interconnection also will be identified in the IRS, and normally will occur prior to facilities, such as switching systems, that are incorporated into the utilities grid.
5. The Company will own and maintain the substation and other Interconnection Facilities beyond the Point of Interconnection, including the facilities between the Point of Interconnection and the Grid Connection Point. Interconnection Facilities from the Generating Facility to the Point of Interconnection will be built by the successful bidders, unless the Company agrees otherwise. Interconnection Facilities from the Point of Interconnection to the Grid Connection Point will be built by the Company and paid for by the successful bidders, unless the Company agrees or determines otherwise.
6. "System Upgrades" are upgrades to the transmission system to allow for safe and reliable interconnected operations. The Company will build, pay for, own and maintain System Upgrades. (i.e., System Upgrades are not considered Interconnection Facilities, and the cost of System Upgrades will not be split between the Company and successful bidders who obtain PPAs through an RFP process.) In evaluating competing proposals, all relevant incremental costs to the electric utility and its ratepayers must be considered. Therefore, the proposed tariff provision provides that the Company's cost for System Upgrades will be considered in the bid evaluations.

7. The Company may propose to pay for Interconnection Facilities for renewable energy facilities between the Point of Interconnection and the Grid Connection Point in order to facilitate the addition of such facilities to its system. The Company plans to include such a proposal in its RFP if there is a mechanism in place for timely recovery of the utility's costs, and the Company has proposed such a mechanism, in the form of a "Renewable Energy Infrastructure Surcharge", in the RPS Framework Docket, Docket No. 2007-0008, that is pending before the PUC.
8. Bidders will be responsible for incorporating the costs of their Interconnection Facilities into their bids. A bidder on the short list will be responsible for the cost of its IRS. The Company may, if practicable, "bundle" IRS work for multiple short list bids into a single IRS if the bids are, among other factors, technically, operationally and geographically (e.g., size, location, technology, timing, operating characteristics, etc.) identical or sufficiently similar to each other.

APPENDIX D
RPS Law

Section 269-92(a) of the Hawaii Revised Statutes ("H.R.S."), as amended by Act 162 (2006) provides that each electric utility company that sells electricity for consumption in Hawaii shall establish a renewable portfolio standard of:

- (1) 10% of its net electricity sales by December 31, 2010;
- (2) 15% of its net electricity sales by December 31, 2015; and
- (3) 20% of its net electricity sales by December 31, 2020.

H.R.S. §269-91 defines "renewable portfolio standard" to mean "the percentage of electrical energy sales that is represented by renewable electrical energy." H.R.S. §269-92(b) (1) requires that at least fifty per cent of the renewable portfolio standards be met by electrical energy generated using renewable energy as the source.

H.R.S. §269-93 provides that: "An electric utility company and its electric utility affiliates may aggregate their renewable portfolios in order to achieve the renewable portfolio standard."

H.R.S. §269-91 defines "renewable electrical energy" to mean:

- (1) Electrical energy generated using renewable energy as the source;
- (2) Electrical energy savings brought about by the use of renewable displacement or off-set technologies; or
- (3) Electrical energy savings brought about by the use of energy efficiency technologies.

H.R.S. §269-91 defines "renewable energy" to mean "energy generated or produced utilizing the following sources:

- (1) Wind;
- (2) The sun;
- (3) Falling water;
- (4) Biogas, including landfill and sewage-based digester gas;
- (5) Geothermal;
- (6) Ocean water, currents and waves;
- (7) Biomass, including biomass crops, agricultural and animal residues and wastes, and municipal solid waste;
- (8) Biofuels; and
- (9) Hydrogen produced from renewable energy sources.

CERTIFICATE OF SERVICE

I hereby certify that I have this date served a copy of the foregoing Order No. 23699 upon the following parties, by causing a copy hereof to be mailed, postage prepaid, and properly addressed to each such party.

CATHERINE P. AWAKUNI
EXECUTIVE DIRECTOR
DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS
DIVISION OF CONSUMER ADVOCACY
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