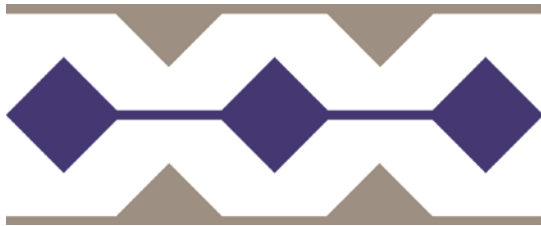


EXHIBIT 2

Draft Request for Proposals for Renewable
Energy Project(s) on the island of O‘ahu



**Hawaiian
Electric**

DRAFT REQUEST FOR PROPOSALS
FOR
VARIABLE RENEWABLE DISPATCHABLE GENERATION

ISLAND OF O‘AHU

OCTOBER 23, 2017

Docket No. 2017-0352

This Request for Proposals (“RFP”) is a DRAFT only. Hawaiian Electric Company, Inc. (“Hawaiian Electric”) will employ a competitive bidding process to select renewable energy projects consistent with the State of Hawai‘i Public Utilities Commission’s (“PUC”) Competitive Bidding Framework. Under the Competitive Bidding Framework, Hawaiian Electric will file the initial draft RFP with the PUC. Then, Hawaiian Electric will seek input from prospective Proposers and other stakeholders through a Technical Conference as described in the draft RFP and will modify the draft RFP to the extent feasible to address input received in order to foster a robust competitive process. The proposed final RFP will be submitted to the PUC for approval and is subject to further revision based upon direction received from the PUC. After approval by the PUC, Hawaiian Electric will issue the final RFP. The proposed schedule for the foregoing process is set forth in this draft RFP in Table 1.

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Chapter 1: Introduction and General Information

Hawaiian Electric Company, Inc. (“Hawaiian Electric” or “Company”) seeks proposals for the supply of qualified renewable energy to be delivered to the Hawaiian Electric System in accordance with this Request for Proposals (“RFP”). The total amount of electric energy being solicited for O‘ahu is up to 485,000 megawatt hours¹ (“MWh”) annually, over a term of 20 years. The resources acquired through this Final RFP must have Guaranteed Commercial Operations Dates that are no later than December 31, 2022 with the intent being that successful Proposers will be able to take advantage of the 2019 investment tax credit.

The Company intends to contract for variable generation projects under this RFP using its new Renewable Dispatchable Generation Power Purchase Agreement (“RDG PPA”), which treats variable resources as fully dispatchable. A copy of the Model RDG PPA is attached hereto as Appendix C. The Company plans to issue a separate RFP for renewable firm, dispatchable capacity and energy for O‘ahu.

Each successful Proposer will provide energy to the Company pursuant to the terms of an RDG PPA to be negotiated between the Company and Proposer, which shall also be subject to PUC review and approval. If the proposed project contains an energy storage component, then the terms of the Model RDG PPA shall be modified to include additional attachments to address the operational characteristics and performance requirements of storage.

The Company will evaluate Proposals using the evaluation and selection process and described in Chapter 4 of this RFP. The Company will evaluate and select Proposals based on both price and non-price factors that impact the Company, its customers, and communities affected by the proposed projects.

A detailed description of the technical requirements for Proposers is included in Chapter 2 of this RFP, in the Proposer’s Response Package attached to this RFP as Appendix B (and various model contracts attached as exhibits to this RFP), and on the Electronic Procurement Platform described in Section 3.2 (i.e. PowerAdvocate Platform).

All requirements necessary to submit Proposal(s) are provided in this RFP. All capitalized terms used in this RFP shall have the meaning set forth in the Glossary of defined terms attached hereto as Appendix A. Capitalized terms that are not included in Appendix A shall have the meaning ascribed herein.

¹ The resource need for the island of O‘ahu identified in the Companies’ PSIP Update Report: December 2016 identified 180 MW of grid-scale PV and 30 MW of grid-scale wind in 2020, and an additional 40 MW of grid-scale PV in 2022. Hawaiian Electric completed a wind expression of interest (“Wind EOI”) for O‘ahu and is currently in confidential non-binding discussions with respondents to this Wind EOI which may result in a request for waiver or waivers from the competitive bidding framework. As a result, the amount of generation set forth in the Companies PSIP through 2022 for O‘ahu has been reduced to remove the 30 MW of generation specified for wind. As the RFP only contains an annual energy target, these megawatts were converted to MWh for this RFP. For simplicity, Hawaiian Electric has described the energy target as up to 485,000 MWh per year.

1.1 Authority and Purpose of the Request for Proposals

- 1.1.1 This RFP is issued in response to Order No. 34856 issued on October 6, 2017 in Docket No. 2017-0352 as part of a procurement process established by the State of Hawai‘i Public Utility Commission (“PUC”).
- 1.1.2 This RFP is subject to Decision and Order (“D&O”) No. 23121 in Docket No. 03-0372 (To Investigate Competitive Bidding for New Generating Capacity in Hawai‘i), which sets forth the PUC’s Framework for Competitive Bidding (“Framework” or “Competitive Bidding Framework”).
- 1.1.3 All Proposals submitted in response to this RFP shall utilize qualified Renewable Energy resource(s) as defined under the Hawai‘i Renewable Portfolio Standards (“RPS”).² By statute, “Renewable energy” means energy generated or produced using 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, including ocean thermal energy conversion; (7) biomass, including biomass crops, agricultural and animal residues and wastes, and municipal solid waste and other solid waste; (8) biofuels; and (9) hydrogen produced from renewable energy sources. HRS §269-91.
- 1.1.4 Proposers should thoroughly review the Hawaiian Electric Companies’ Power Supply Improvement Plans (“PSIPs”), filed in Docket No. 2014-0183 on December 23, 2016 (“PSIP Update Report: December 2016”).
- 1.1.5 Consistent with the PSIP Update Report: December 2016, the primary purpose of this RFP is to obtain Renewable Energy to enable the Company to continue to transform Oahu’s power supply portfolio from fossil fuel-based generation to renewable-based generation to lower costs for customers. The Company does not have a predetermined preference for a particular renewable energy source or technology and acknowledges that the requirements of this RFP may be satisfied by a portfolio of generation resource options. The Company believes this approach allows for flexibility and encourages Proposers to develop and submit a broad range of innovative Proposals.
- 1.1.6 This RFP is intended to elicit Proposals that will enable Hawaiian Electric to obtain renewable energy generation at a competitive, reasonable cost with reliability, viability and operational characteristics consistent with the Company’s long-term planning and energy policy requirements.

1.2 Scope of the RFP

- 1.2.1 Consistent with the resource needs for the island of O‘ahu in the Company’s PSIP Update Report: December 2016, the Company is seeking Proposals for the supply of up to approximately 485,000 MWh per year (“MWh/year”) of Renewable Energy to be

² RPS requirements in Hawai‘i are codified as Hawai‘i Revised Statutes (“HRS”) 269-91 through 269-95.

delivered to the Hawaiian Electric System on the Island of O‘ahu in the State of Hawai‘i, under contract terms to be negotiated between the Company and the Proposer in an RDG PPA.

- 1.2.2 This RFP targets projects that can satisfy the resource needs identified in the PSIP Update Report: December 2016. In the event the Company does not procure all of the energy needed to meet the Company’s requirements set forth in the PSIP, or generation is needed to fulfill later requirements set forth in the PSIP, or as otherwise determined by the Company, then the Company intends to issue “Stage 2” of this RFP to procure such additional generation. System needs, including available hosting capacities, will be updated prior to the issuance of Stage 2 or any subsequent RFPs. The Company would consider projects that cannot reach a Commercial Operations Date by December 31, 2022 in subsequent RFPs.
- 1.2.3 The Company will approach procuring the energy amount targeted in this RFP in two stages. The Company is focused on helping projects meet the 2019 investment tax credit, and is targeting signing two PPAs on O‘ahu in “Stage 1” of the procurement process. The Company believes that limiting the number of projects during Stage 1 of the procurement process will help projects move through contracting and PUC approval in a more timely manner. The targeted number of Proposals sought in Stage 1 was determined based on several factors, including the size of the largest contingency unit and available hosting capacity on circuits. As noted in Section 1.2.2 above, if the Company is unable to procure all of the energy needed to meet the Company’s requirements in Stage 1, the remaining generation need will be sought in Stage 2 of this RFP. In Stage 2, the Companies will also use lessons learned in Stage 1 and reevaluate the storage options and requirements being sought to take advantage of advancements in technology and declining storage costs.
- 1.2.4 Proposers are required to offer proposals for Facilities that are no larger than 135 MW due to system reliability requirements. The minimum size of a Facility shall be the threshold for a waiver from the Framework for Competitive Bidding applicable to O‘ahu. See Framework Section II.A.f.
- 1.2.5 Proposals that will require extensive system upgrades (e.g., that cannot be constructed in time to meet the targeted Guaranteed Commercial Operations Date) will not be considered in this RFP. See Section 4.3 (Threshold Requirements).
- 1.2.6 Proposers will determine their project site. Proposers have the option of submitting a proposal for any potential Company Offered Sites that may be offered as described in Section 3.10 below.
- 1.2.7 Proposers accepting the terms and conditions of the Model RDG PPA will be given preference over Proposers that take exceptions to the Model RDG PPA’s terms and conditions. Any provisions of the Model RDG PPA approved and deemed non-negotiable by the PUC may not be modified by the Proposer.

- 1.2.8 For purposes of this RFP, the Company shall only consider Proposals for Projects located on the Island of O‘ahu.
- 1.2.9 Each Proposal submitted in response to this RFP must represent a Project that is capable of meeting the requirements of this RFP without having to rely on the completion or implementation of any other Project submitted in response to this RFP or any other RFP.
- 1.2.10 Successful Proposers will own and operate the Facility during the term of the PPA and will be responsible for all costs including project development, completion of an Interconnection Requirement Study (“IRS”), land acquisition,³ permitting, financing, construction of the facility and all Interconnection Facilities, and operations and maintenance.
- 1.2.11 Proposer will build, finance, and operate the Facility. PPAs for projects selected through this RFP will be based on the Model PPA, as described in Section 3.8 below. Under the Model PPA, the Company will maintain rights to fully direct the dispatch of the Facility.
- 1.2.12 Term of the PPA will be twenty (20) years.
- 1.2.13 Proposals may be submitted in either of the following configurations:⁴
- Not coupled with energy storage. Where a proposed Facility is not coupled with energy storage, the maximum output of the Facility shall not exceed the circuit-level hosting capacity of the circuit to which the Facility will be interconnected.⁵
 - Coupled with energy storage.

Where a photovoltaic (“PV”) energy resource is coupled with energy storage, the energy storage shall be sized to provide sufficient storage capacity to avoid export from the project that exceeds the available circuit-level hosting capacity and able to discharge the stored energy for at least four hours. For example, if the PV has a maximum output rating of 50 MW_{ac} and the available circuit-level hosting capacity is 20 MW, the project may export up to 20 MW directly to the system. In this case, the energy storage shall be sized to store the excess energy that exceeds the available circuit-level hosting capacity (up to 50 MW – 20 MW = 30 MW). The amount of energy stored shall be sufficient to export the excess capacity (30 MW in this example) over a four-hour period at some later time. If the available circuit-level

³ See Section 3.11 regarding results of the Land RFI.

⁴ For context each subtransmission circuit (46 kV on O‘ahu) has a certain amount of “hosting capacity.” This is the amount of power a conductor can safely carry within engineering limits. For the purposes of this RFP, the hosting capacity is expressed in megawatts (“MW”). The remaining hosting capacity on a given circuit is the difference between the total hosting capacity and the amount of peak power already carried on a circuit.

⁵ Proposers are advised that circuit loadings may change in the future. This will reduce the available circuit-level hosting capacity.

hosting capacity is 0 MW, the project may not be dispatched between 9 a.m. and 4 p.m., and the energy storage shall be sized to store its energy for export at the project's rated capacity over a four-hour period at some later time. The Company will reserve the right to dispatch net energy available from the facility, either from the PV and/or storage, at times that are beneficial to the system and for customers under the terms of the PPA. It should be noted that excess energy conditions may occur from time to time between 9 a.m. and 4 p.m., even though the circuit-level hosting capacity is not exceeded.

Where a wind energy resource is coupled with storage, the energy storage shall consider the reduced need and ability to accept available energy production during solar production periods and low customer use. The Company will provide data to support design (net demand data). Excess energy conditions are also likely to occur during the midnight to 5 a.m. period, when system demand is typically low. During these periods, the export from the wind resource may need to be adjusted. Projects with wind coupled with storage must have adequate circuit capacity to allow the combined export of the wind resource and storage.

Proposers are encouraged to confer with the Company as described in Section 2.2.1 below should they have any questions about circuit-level or system-level hosting capacity or system-level hosting capacity or excess energy concerns.

- 1.2.14 Consistent with the assumptions in the PSIP Update Report: December 2016, Proposer will pursue all available applicable federal and state tax credits and Proposal pricing shall be set to incorporate the benefit of such tax credits or pass the benefit of the tax credits to the Company's customers (See Appendix C (Model PPA, Attachment J, Section 5)).
- 1.2.15 Payments under the Model RDG PPA will be made by the Company to the Seller as set forth in the Model RDG PPA.
- 1.2.16 Project will interconnect to the Company's grid at the subtransmission or transmission level. Interconnection Requirements and IRS process are set forth in Section 5.1 below.
- 1.2.17 Proposer's proposed Interconnection Facilities shall be compatible with the Company System and must meet the requirements set forth in the IRS and the Model PPA, as may be revised to reflect the results of the IRS. Proposer shall be responsible for all costs related to the design and installation of all Interconnection Facilities. The communications and control requirements will be determined during the Interconnection Requirements review, and will define telemetry, control, and communications facilities provided by the Proposer to the Point of Interconnection. Alternate control will be required and may consist of interconnection with the Company's microwave system.
- 1.2.18 Storage systems that are coupled with a Facility shall only be charged by Renewable Energy generated by the Facility (and not delivered from the grid).

- 1.2.19 Storage systems may be utilized by the Seller, in Seller's discretion, to meet the Performance Requirements for energy delivery specified in the Model RDG PPA, including frequency response (droop characteristics), company dispatch of power, ramp rates, disturbance ride through capabilities, etc., in addition to shifting energy delivery to the power system to periods where resource production exceeds Company dispatch requirements. Where storage is utilized, the functionality of the storage shall be maintained throughout the life of the facility.
- 1.2.20 If selected, Proposers shall be responsible for the decommissioning of the Project and the restoration of the Site upon the expiration of the PPA, as described in Attachment G, Section 7 of the Model RDG PPA. In addition to the requirements in the PPA, decommissioning responsibilities should also include developing and implementing a program for the recycling to the fullest extent possible, or otherwise proper disposal, of installed infrastructure. Proposer should describe its decommissioning plan, including programs for recycling of installed infrastructure, if any, and how Site restoration to its original ecological condition will be guaranteed in the event of default by the Proposer in the applicable Site Control documentation.

1.3 Competitive Bidding Framework

Consistent with the Framework, this RFP outlines the Company's requirements in relation to the resources being solicited, the procedures for conducting the RFP process, and includes information and instructions to prospective Proposers participating in and responding to this RFP.

1.4 Role of the Independent Observer

- 1.4.1 Part III.C.1 of the Framework sets forth the circumstances under which an Independent Observer is required in a competitive bidding process. In particular, the Framework provides that "[a]n Independent Observer is required whenever the utility or its affiliate seeks to advance a project proposal (i.e., in competition with those offered by [Proposers]) in response to a need that is addressed by its RFP, or when the Commission otherwise determines." Accordingly, the PUC has retained an Independent Observer to oversee and monitor the process for this RFP. The Independent Observer will coordinate with PUC staff throughout the RFP process to ensure that the RFP process is undertaken in a fair and unbiased manner.
- 1.4.2 The role of the Independent Observer, as described in the Framework, will include the following:
- Monitor all steps in the competitive bidding process
 - Monitor communications (and communications protocols) with Proposers
 - Monitor adherence to the Company's Code of Conduct
 - Submit comments and recommendations, if any, to the PUC concerning the RFP
 - Review the utility's Proposal evaluation methodology, models, criteria, and assumptions
 - Review the utility's evaluation of Proposals
 - Advise the utility on its decision-making

- Monitor contract negotiations with Proposers
- Report to the PUC on monitoring results during each stage of the competitive bidding process
- Provide an overall assessment of whether the goals of the RFP were achieved

1.4.3 The Independent Observer for this RFP is listed below:

[NAME, ADDRESS, CONTACT INFO]

1.5 Communications Between the Company and Proposers – Procedures Manual

- 1.5.1 Communications and other procedures under this RFP are governed by the “Procedures Manual,” developed by the Company as required by the Framework, 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 RFP process. The Company’s Procedures Manual is attached hereto as Appendix D (Code of Conduct Procedures Manual for the Competitive Bidding Program).
- 1.5.2 Pursuant to the Procedures Manual, all pre-Proposal communication with prospective Proposers, including the Company’s Self-Build Team and any Affiliate Team (as those terms are defined in the Procedures Manual), will be conducted via the Company’s website, Electronic Procurement Platform and/or electronic mail (“Email”) as specified in the Procedures Manual. Any Email to the Company must be sent to the address specified in Section 1.6 below (the “RFP Email Address”). Any correspondence sent to any other Email address will not receive a response. Frequently asked questions submitted by prospective Proposers and the answers to those questions may be posted on the Company website or sent through the Electronic Procurement Platform to registered individuals. The Company reserves the right to respond only to comments and questions it deems are appropriate and relevant to the RFP, in its sole discretion.
- 1.5.3 After submission of Proposals, all contacts between the Company and Proposers will be coordinated by the Energy Contract Manager identified in Section 1.6. During this post-Proposal submission period, the Company may have communications and meetings with individual Proposers for purposes of clarifying Proposals.
- 1.5.4 Each Proposer must execute a Mutual Confidentiality and Non-Disclosure Agreement (“NDA”) attached hereto as Appendix F. All confidential information will be transmitted to the requesting party via the RFP email address and/or the Electronic Procurement Platform, only after receipt of such fully executed NDA. Notwithstanding the execution of a NDA by a requesting party, the Company reserves the right, in its sole discretion, not to disclose certain confidential information.
- 1.5.5 Except as expressly permitted and in the manner prescribed in the Procedures Manual, any unsolicited contact by a Proposer or prospective Proposer with personnel of the

Company pertaining to this RFP is prohibited and may constitute grounds for disqualification.

1.6 Company Contact for Proposals

The Energy Contract Manager and primary contact for this RFP is:

Greg Shimokawa
Energy Contract Manager
Hawaiian Electric Company, Inc.
Central Pacific Plaza Building, 21st Floor
220 South King Street
Honolulu, Hawai'i 96813

RFP Email Address: oahuvariablerfp@hawaiianelectric.com

1.7 Proposal Submittal Requirements

- 1.7.1 Detailed requirements regarding the form and organization of the Proposal are set forth in Chapter 3 of this RFP. Proposals shall be submitted in the form of the Proposer's Response Package attached hereto as Appendix B (Proposer's Response Package) pursuant to Chapter 3 of this RFP.
- 1.7.2 By submitting a Proposal in response to this RFP, each Proposer certifies that the Proposal has been submitted in good faith and without fraud or collusion with any other person or entity. Proposer shall complete with each Proposal, a Certificate of Non-Collusion in the form provided on the Electronic Procurement Platform.
- 1.7.3 Proposals shall be submitted via the Electronic Procurement Platform and must be received (confirmed by a time and date stamp) by 2:00 pm Hawai'i Standard Time (HST) on the date shown in the RFP Schedule in Section 3.1, Item 11, below. Incomplete Proposals will not be accepted. No hard copies of the Proposals will be accepted.

1.8 Proposal Fee

- 1.8.1 Proposers are required to tender a non-refundable Proposal Fee of \$10,000 for each proposal submitted.
- 1.8.2 Proposers may submit multiple Proposals for projects on the same or differing Sites if a Proposal Fee is paid for each separate Proposal. The only exception being that a Proposer may submit a Proposal for a project with and without a storage option for a Project on the same site for a single Proposal Fee, as described in Section 1.2.13.
- 1.8.3 The Proposal Fee shall be in the form of a cashier's check made payable to Hawaiian Electric Company, Inc. and delivered to the Company's Energy Contract Manager by 2:00 pm (HST) on the date shown in the RFP Schedule in Section 3.1, Item 11, below, the same day that the Proposal is due. Failure to submit the Proposal Fee by the specified deadline shall result in disqualification.

1.9 Procedures for a Self-Build Option

1.9.1 Consistent with the Competitive Bidding Framework, the Company will have the opportunity to offer a response to this RFP (the “Self-Build Option”). With regard to the preparation of the evaluation of the Self-Build Option, the Company will follow certain procedures designed to safeguard against and address concerns associated with preferential treatment or preferential access to information. If the Company decides to propose a Self-Build Option, the Framework provides that the procedures developed for an RFP shall call for arms-length dealing with regard to agents of the Company who are developing a Self-Build Option (the “Self-Build Team”) and those agents of the Company who perform the evaluation of the RFP (the “Evaluation Team”). The Company’s Code of Conduct and Procedures Manual submitted to the PUC in Docket No. 2017-0352 on October 23, 2017, are in place to safeguard against and address concerns associated with preferential treatment or preferential access to information. A copy of the Procedures Manual is attached hereto as Appendix D. The Independent Observer will assist the PUC in ensuring that the established procedures and the terms of the Code of Conduct are followed and administered fairly such that no preferential treatment or preferential access to information will be provided to the Self-Build Team by the Evaluation Team. Pursuant to the Framework and as set forth in the RFP Schedule, the Company will submit the Proposal for the Self-Build Option(s) through the Electronic Procurement Platform a minimum of one (1) Day before other Proposals are due.

1.10 Dispute Resolution Process

- 1.10.1 If disputes arise under the RFP, the provisions of this Section 1.10 and the dispute resolution process established in the Framework shall control. See Part V of the Framework.
- 1.10.2 Proposers who challenge or contest any aspect of the RFP process must first attempt to resolve their concerns with the Company and the Independent Observer (“Initial Meeting”). The Independent Observer will seek to work cooperatively with the parties to resolve any disputes or pending issues, and may offer to mediate the Initial Meeting to resolve disputes prior to such issues coming before the PUC.
- 1.10.3 Any and all disputes arising out of or relating to the RFP which remain unresolved for a period of twenty (20) days after the Initial Meeting takes place may, upon the agreement of the Proposer and the Company, be submitted to confidential mediation in Honolulu, Hawai‘i, pursuant to and in accordance with the Mediation Rules, Procedures, and Protocols of Dispute Prevention Resolution, Inc. (“DPR”) (or its successor) or, in its absence, the American Arbitration Association then in effect (“Mediation”). The Mediation shall be administered by DPR. If the parties agree to submit the dispute to Mediation, the Proposer and the Company shall each pay fifty percent (50%) of the cost of the Mediation (i.e., the fees and expenses charged by the mediator and DPR) and shall otherwise each bear their own Mediation costs and attorney’s fees.

- 1.10.4 If settlement of the dispute is not reached within sixty (60) days after commencement of the Mediation, or if after the Initial Meeting, the parties do not agree to submit any unresolved disputes to Mediation, then as provided in the Framework, the Proposer may seek a determination of the issue by the PUC.
- 1.10.5 In accordance with the Framework, the PUC will serve as the arbiter of last resort for any disputes relating to this RFP involving Proposers. The PUC will use an informal expedited dispute resolution process to resolve the issue within thirty (30) days, as described in Parts III.B.8 and V of the Framework.⁶ There shall be no right to hearing or appeal from this informal expedited dispute resolution process.
- 1.10.6 If any Proposer initiates a dispute resolution process for any dispute or claim arising under or relating to this RFP other than permitted by the Framework and Section 1.10 of this RFP (e.g. arbitration or court proceeding), then such Proposer shall be responsible for any and all attorney's fees and costs that may be incurred by the Company or PUC in order to resolve such claim.

1.11 No Protest or Appeal

Subject to Section 1.10 of this RFP, no Proposer or other person will have the right to protest or appeal any award of a Project made by the Company.

1.12 Modification or Cancellation of the Solicitation Process

- 1.12.1 Unless otherwise expressly prohibited, the Company may, at any time up to final award, in consultation with the Independent Observer, postpone, withdraw and / or cancel any requirement, term or condition of this RFP, including deferral of the award of any contract, and / or cancellation of the award all together, all of which shall be without any liability to the Company.
- 1.12.2 The Company may modify this RFP subject to requirements of the Framework, i.e. review by the Independent Observer and submission to the PUC with thirty (30) Days' notice before the modified RFP may be issued, unless the PUC directs otherwise. See Framework Part IV.B.10. The Company will follow the same procedure with regard to any potential postponement, withdrawal or cancellation of the RFP or any portion thereof.

⁶ The informal expedited dispute resolution process does not apply to PUC review of contracts that result from the RFP. See Decision and Order No. 23121 at 34-35. Further, the informal expedited dispute resolution process does not apply to the Framework's process relating to issuance of a draft and final RFP, and/or the PUC approval of the RFP as: (1) the Framework (and the RFP) set forth specific processes whereby interested parties may provide input through the submission of comments; and (2) the Framework's dispute resolution process applies to "Bidders" and there are no "Bidders" at this stage in the RFP process.

Chapter 2: Resource Needs and Requirements

2.1 Performance Standards

Proposals must meet the attributes set forth in this RFP and the Performance Standards identified in the Model RDG PPA.

2.2 Transmission and Distribution System

2.2.1 Company information regarding the relative remaining capacity of subtransmission and transmission circuits on O‘ahu will be made available to Proposers only after execution of a Non-Disclosure Agreement. Non-confidential information has been published in the Companies’ December 23, 2016 PSIP Update Report on beginning on page N-56 of Appendix N. Proposers should perform their own evaluation of project locations and the Company does not guarantee any project output or ability to connect based on such information. Proposers are invited to meet with the Company prior to submitting a Proposal to discuss specific questions regarding a particular Proposal. **Please direct inquiries to Interconnection Services at Interconnection.services@hawaiianelectric.com.**

2.2.2 Prior to the RFP, developers may inquire as to viability of proposed real project locations. Hypothetical projects and location strategies will be addressed only in general terms.

2.2.3 Additional site-specific information will be provided in the IRS process.

2.3 Interconnection to the Company System

2.3.1 The means of interconnection between a proposed Facility and the Company System is a critical consideration for all Proposers. The Proposers’ proposed Interconnection Facilities shall be compatible with the Company System. Proposers shall demonstrate that all proposed Projects adequately consider their impacts on the performance and reliability of the Company System. The design of the Interconnection Facilities, including power rating, Point(s) of Interconnection with the Company System, and scheme of interconnection, shall meet Company standards and be designed such that, with the addition of the facility, the Company system can meet all relevant Transmission Planning Criteria⁷ and any amendments thereto.

2.3.2 The Interconnection Facilities includes both: (1) Seller-Owned Interconnection Facilities; and (2) Company-Owned Interconnection Facilities.

2.3.3 Tariff Rule No. 19, a copy of which is attached hereto as Appendix J, establishes provisions for Interconnection and Transmission Upgrades. The tariff provisions are intended to simplify the rules regarding who pays for, installs, owns and operates

⁷ Transmission Planning Criteria is further described in the Companies’ December 23, 2016 PSIP Update Report on beginning on page O-11 of Appendix O.

interconnection facilities in the context of competitive bidding. The Company uses the breaker-and-a-half scheme for its transmission switching station as shown in Attachment A of Tariff Rule No. 19. Proposers should follow this scheme for purposes of their estimates.

- 2.3.4 Selecting a site for new generation and / or transmission line terminus has cost impacts to the Company System. The Proposer shall be responsible for all costs required to interconnect a Project to the Company System, including all Seller-Owned Interconnection Facilities and Company-Owned Interconnection Facilities.
- 2.3.5 Proposers are required to include in their pricing proposal, all costs for interconnection and transmission upgrades or distribution upgrades expected to be required between their Facility and their proposed Point of Interconnection. See Appendix I (Interconnection Facilities and Cost Information). Selected Proposers will be responsible for the actual final costs of all Seller-Owned Interconnection Facilities and Company-Owned Interconnection Facilities.
- 2.3.6 Proposals that include a storage component must design their facility to provide:
- Load Shifting, which means that energy is absorbed by the battery in one period of time and discharged to the grid at another period of time; and
 - Frequency Response, which means that the battery will respond with rapid import or export during imbalances of supply and demand on the grid where the system frequency will increase or decrease suddenly.
 - Frequency Regulation, which means that the power output of or input to the battery can be adjusted in response to signals from the Company EMS such that the battery can contribute to the system's regulating reserve capacity
 - Regulating Reserve, which means the amount of capacity between the current load operating point and its maximum import and export capacity.
 - Storage functionality that is maintained throughout the lifetime of their facility.
- 2.3.7 Proposers are required to include in their Proposal a \$/year Lump Sum Payment amount per \$100,000 of actual interconnection costs (de-escalator). The Company will use the \$/year figure along with the Proposer's interconnection cost estimate (or, in the Company's discretion, the Company's estimate) in the initial economic analysis of the Proposal.
- 2.3.8 All projects will be screened for general readiness to comply with the requirements for interconnection. Proposals selected to the Final Award Group will be subject to further study in the form of an Interconnection Requirements Study. The IRS process is further described in Section 5.1 of this RFP. The IRS will provide information including, but not limited to, a power systems analysis and identification of equipment, costs, and schedule to evaluate the upgrades necessary to interconnect the proposed Project into the Company

System, individually or on a portfolio basis. The results of the completed IRS, as well as any mitigation measures identified, will be incorporated into the terms and conditions of a final executed PPA. The Proposer must provide all Proposal information required to complete the IRS with the Proposal, as described in Appendix B. Any additional information required must be provided no later than 15 days after request by the Company.

Chapter 3: Instructions to Proposers

3.1 Schedule for the Proposal Process

Table 1 sets forth the schedule for the proposal process (the “RFP Schedule”). This schedule is designed to provide Proposers the opportunity to safe harbor tax credits. The Company reserves the right to revise the RFP Schedule as necessary. Changes to the RFP Schedule will be posted to the RFP website.

Table 1
RFP Schedule

Milestone	Schedule Dates
(1) PUC Opens RFP Docket	October 6, 2017
(2) Draft RFP is filed	October 23, 2017 ⁸
(3) Technical Conference Webinar	November 3, 2017
(4) 1st Round of Stakeholder Comments submitted to Companies	November 17, 2017
(5) Companies Filing of Proposed Final RFP and Model PPA	December 21, 2017
(6) 2nd Round of Stakeholder Comments submitted to Commission	January 12, 2018
(7) Completion of Commission review period of Proposed Final RFPs	January 29, 2018
(8) Commission approves Final RFP and Model PPA	30 days after (7) ⁹
(9) Final RFP is issued	5 business days after (8)
(10) Proposal due for Self-Build Option	1 day before (11) at 2:00 pm HST
(11) Proposals due for all Other Proposals	60 days after (9) at 2:00 pm HST
(12) Selection of Short List	30 days after (11)
(13) Publication of BAFO Information	5 business days after (12)
(14) Self-Build Option BAFO due (if any)	1 business day before (15)
(15) Other Proposers' BAFOs due	5 business days after (13)
(16) Selection of Final Award Group	120 days after (15)
(17) Contract Negotiations Start	5 business days after (16)

In order to enable developers to safe harbor the 2019 ITC the Companies are proposing to file PPA applications for selected projects in Stage 1 in approximately the first quarter of 2019 for the O'ahu, Hawai'i Island, and Maui variable RFPs and that PUC approval for such PPAs is obtained for the O'ahu, Hawai'i Island, and Maui variable RFPs in the third quarter of 2019 and the Maui variable RFP in August of 2019. Construction for these projects would be expected in the same timeframe. The above timeline and the ability to enable the safe harboring of the 2019 ITC will be contingent on the ultimate procedural schedule for this docket, including approval of the final RFPs in this docket and issuance of such RFPs and the results of contract negotiations. Further, the Companies anticipate beginning Stage 2 of the competitive bidding process in approximately August of 2019,

⁸ Subsequent dates are dependent on the procedural schedule set by the PUC.

⁹ The Framework for Competitive Bidding Company intends to request PUC approval of the Proposed Final RFP and Model PPA within 30 days of filing of the Proposed Final RFP. The Framework for Competitive Bidding, adopted by the Commission through Order No. 23121, filed on December 8, 2006 in Docket No. 03-0372, summarized in an Order issued on February 24, 2011 in Docket No. 2011-0038, and cited throughout Order No. 34856, provides for a thirty day period for Commission review and approval of the RFPs. The Companies propose expanding this review period as shown here in order to allow additional time, given that the review falls during the holidays.

though this is subject to further evaluation based on the results and final timing of Stage 1.

3.2 Company RFP Website / Electronic Procurement Platform

3.2.1 The Company has established a website for general information to share with potential Proposers. The website is located at the following link:

www.hawaiianelectric.com/competitivebidding

The Company will provide general notices, updates, schedule and other information on the RFP website throughout the process. Proposers should check the website frequently to stay abreast of any new developments. This website will also contain the link to the Electronic Procurement Platform employed by the Company for the receipt of Proposals. The Company will send updates posted on the website through the Electronic Procurement Platform.

3.2.2 “Sourcing Intelligence,” developed by Power Advocate is the Electronic Procurement Platform that the Company has licensed and will utilize for this RFP. Proposers who do not already have an existing account with PowerAdvocate, and intend to submit a Proposal for this RFP, will need to register as a “Supplier” with PowerAdvocate.

3.2.3 There are no license fees, costs, or usage fee to Proposers for the use of the PowerAdvocate Platform.

3.2.4 Proposers can register for a new account by clicking on the “Registration” button on the PowerAdvocate website at the following address:

www.poweradvocate.com

See Appendix E for user information and instructions on PowerAdvocate’s Sourcing Intelligence procurement platform.

3.2.5 In order to complete the registration, the Proposer will need to review and accept PowerAdvocate’s Terms of Use. The Terms of Use are available online and a copy is also attached for convenience in Appendix E (PowerAdvocate User Information).

3.2.6 Once a Proposer has successfully registered as a Supplier with PowerAdvocate, the Proposer shall request access to the subject RFX¹⁰ event from the Company Contact via email through the RFP Email Address. The email request must list the Supplier name under which the Proposer has registered with PowerAdvocate. Once the RFX event is opened, Proposers will have online access to general notices, RFP-related documents, and other communications via Sourcing Intelligence, and may begin to submit their Proposal.

3.2.7 Proposals shall be accepted only through the PowerAdvocate Platform.

¹⁰ RFX event is the terminology used in Sourcing Intelligence to describe the RFP event.

- 3.2.8 Proposals must be submitted through Sourcing Intelligence by 2:00 pm Hawai'i Standard Time (HST) on the date shown in the RFP Schedule in Section 3.1. Sourcing Intelligence will not accept the submittal of late information for this RFX event. It is the Proposer's sole responsibility to ensure that its complete information has been submitted on time. Any Proposal information that is merely SAVED, but not SUBMITTED will not be considered.
- 3.2.9 All Proposals must be prepared in accordance with the procedures and format specified in the RFP and the RFX event. Proposers are also required to respond to all questions and provide all information requested in the RFP and the RFX event, as applicable. This process is intended to provide an orderly, consistent and fair evaluation of the Proposals.

3.3 Technical Conference

The Company is open to ideas and feedback on these draft RFP documents and on the RFP process in general. To facilitate that feedback, the Company will hold a Technical Conference (webinar) in accordance with the Competitive Bidding Framework to discuss the provisions and requirements of this and other RFPs being offered in parallel for prospective Proposers and other stakeholders. The Technical Conference will allow stakeholders to ask questions and better understand the Companies' proposed competitive bidding process and draft documents. Such opportunity will then allow the stakeholders to provide more refined and detailed feedback regarding the process and draft documents.

The Company encourages any party interested in submitting a Proposal to attend the Technical Conference. This Technical Conference will be held on November 3, 2017 as described in the Schedule in Section 3.1 above. Parties interested in attending the Technical Conference should check the RFP Website for updates or further announcements on the time of the Technical Conference. An electronic version of the webinar will be made available on demand via the RFP website listed in Section 3.2.1 above. Prospective Proposers may submit written questions in advance regarding the proposed RFP to the RFP Email Address set forth in Section 1.6. The Company will attempt to answer such questions during the Technical Conference. No answers to questions will be sent or posted prior to the Technical Conference. The Company will respond only to questions it deems relevant and reserves the right not to respond to questions. The Company will endeavor to address questions and comments received during the Technical Conference and may, but is not required to, post or send select written responses subsequent to the Technical Conference. In the event a conflict exists between any oral and post-conference written response, the post-conference written response shall control.

After PUC approval and issuance of the final RFP, the Company may hold a Proposers' Conference to clarify any aspect of the RFP for potential Proposers. If the Company elects to hold such a conference, the date and time will be posted on the RFP Website.

The Company has also prepared a webinar to introduce the concepts and provisions of the new Model RDG PPA. The Company encourages any party interested in submitting a Proposal to view the RDG PPA Webinar. This RDG PPA Webinar will be made

available on-demand on October 24, 2017 via the Company website listed in Section 3.2.1 above. Parties interested in submitting questions regarding the RDG PPA Webinar may send them to renewableacquisition@hawaiianelectric.com.

3.4 Preparation of Proposals

- 3.4.1 Each Proposer shall be solely responsible for reviewing the RFP (including all attachments and links) and for thoroughly investigating and informing itself with respect to all matters pertinent to this RFP, the Proposer's Proposal and Proposer's anticipated performance under the PPA.
- 3.4.2 Proposers shall rely only on official information provided by the Company in this RFP when preparing their Proposal. The Company will rely only on the information included in the Proposals and additional information from Proposers solicited by the Company to evaluate the Proposals received.
- 3.4.3 Each Proposer shall be solely responsible for and shall bear all of its costs incurred in the preparation of its Proposal and / or its participation in this RFP, including, but not limited to, all costs incurred with respect to the review of the RFP documents, attending meetings with the Company, Site visits, third-party consultant consultation, and investigation and informing itself with respect to matters pertaining to its Proposal and this RFP, and any costs associated with the same shall not be reimbursed by the Company to any Proposer, including the selected Proposer(s).
- 3.4.4 Each Proposal shall contain the full name and business address of the Proposer and shall be signed by an authorized officer or agent¹¹ of the Proposer.

3.5 Organization of the Proposal

Appendix B (Proposer's Response Package) provides information for submitting Proposal information through the PowerAdvocate Platform.

Proposer shall be required to agree to the use of electronic signature within the PowerAdvocate Platform and provide an electronic signature on the appropriate certification form for the Proposal.

3.6 Proposal Limitations

Proposers expressly acknowledge that Proposals are submitted subject to the following limitations:

The RFP does not commit or require the Company to award a contract, pay any costs incurred by a Proposer in the preparation of a Proposal, or procure or contract for products or services of any kind whatsoever. The Company reserves the right, in its sole

¹¹ Proposer's officer or agent must be authorized, in writing, via Proposer's organizational documents (i.e., Articles of Incorporation, Articles of Organization, By-laws, etc.), resolution or similar documentation.

discretion, to accept or reject, in whole or in part, any or all Proposals submitted in response to this RFP, to negotiate with any or all Proposers eligible to be selected for award, or to withdraw or modify this RFP in whole or in part at any time.

- Company reserves the right, in its sole discretion, to request additional information from any or all Proposers relating to their Proposals or to request Proposers to clarify the contents of their Proposals. Proposers that are not responsive to such information requests may be eliminated from further consideration upon consultation with the Independent Observer.
- Company reserves the right, in its sole discretion, to solicit additional Proposals from Proposers after reviewing the initial Proposals. Other than as provided herein, no Proposer will be allowed to alter its Proposal or add new information to a Proposal after the due date for submission of Proposals.
- All material submitted in response to this RFP shall become the sole property of the Company, subject to the terms of the NDA.

3.7 Proposal Compliance and Bases for Disqualification

Proposers may be deemed non-responsive and / or Proposals may not be considered for reasons including, but not limited to, the Eligibility Requirements listed in Section 4.2 and the following:

- The Proposal is not in conformance with the RFP requirements and instructions;
- The Proposal is conditional in a manner not permitted by the RFP;
- Company is not satisfied, in its sole discretion, that the Proposer is capable of meeting its financial obligations with respect to its Proposal for reasons including, but not limited to, Proposer's inadequate credit rating or creditworthiness or Proposer's failure to supply a requested letter of credit, or other form of security acceptable to the Company; and/or
- Company is not satisfied, in its sole discretion, that the Proposer is capable of fully and timely implementing its Proposal.

3.8 Power Purchase Agreement

3.8.1 The Power Purchase Agreement for Proposers selected under this RFP will be in the form

of the Company's Model PPA¹², attached as Appendix C to this RFP.

- 3.8.2 In general, under the Model RDG PPA, payment to the Seller shall be made in two parts: a Lump Sum Payment component to cover the fixed costs of the Project and an Energy Payment (\$/MWh component) to cover variable operations and maintenance costs (if applicable, depending on the resource). In return, the Seller shall guarantee minimum availability metrics to ensure that the Facility is maintained and available for production as well as provide an indication of the available energy available in near real-time for the Company's dispatch.
- 3.8.3 Proposers who elect to propose modifications to the Model RDG PPA shall provide a red-line version of the Model RDG PPA with their requested changes and revisions as a component of their Proposals. Such modifications will be evaluated as a non-price evaluation criteria as further described in Section 4.4 and Attachment L. In order to facilitate this process, the Company will make available electronic versions of the Model PPA. The Company will review and consider the requested changes and reflect the suggested changes in the overall risk assessment associated with the evaluation of each Proposal. Proposers are strongly discouraged from proposing fundamental changes to the risk allocation set forth in the Model PPA. Any terms of the Model PPA designated as non-negotiable by the PUC will not be open for negotiation and must be accepted by the selected Proposer(s) as is.
- 3.8.4 The following sections of the PPA, in addition to any additional sections designed by the PUC as non-negotiable, are not negotiable and Proposers who submit proposals showing revisions to these sections are subject to disqualification: Article 1, Article 2, Article 3, Article 7, Article 8, Article 9, Article 11, Article 12.3, Article 14, Article 15, Article 16, Article 17, Article 18, Article 20, Article 21, Article 22, Article 25, Article 26, Article 27, Section 29.15, Sections 2 and 3 of Attachment B, Attachment C, Attachment H, Attachment I, Attachment J, Attachment M, Attachment T, and Attachment U. Changes to the above sections will be allowed to reflect the results of the IRS and or changes in law that occur prior to the Execution Date. Although the Company is unlikely to consider substantive changes to Attachment Q, the Company intends to receive Proposer input on this attachment.

¹² As directed by the PUC in the Kuia Solar (2015-0224) and South Maui Renewable Resources (2015-0225) dockets, the Company has been exploring alternative contract structures to implement that better address the growing issue of curtailment of excess energy as the Company progresses towards 100% renewable energy. Additionally, as generation resources continue to shift from primarily centralized, utility-owned facilities to more distributed facilities owned by independent power producers, greater operational flexibility is required to ensure the safe, reliable, and cost effective operation of the grid. Consistent with meeting the future needs of the grid, the expectation is that all generation resources, whether utility, IPP or customer owned, will contribute to maintaining system stability. As a result, the Company is looking to move away from the traditional, intermittent renewable energy model of payments for energy and is seeking to select Projects based on the Model PPA where payments are instead based on a Facility's availability and performance for a measured level of available solar or wind resource. This eliminates the revenue uncertainty associated with curtailment for IPPs while also providing the Company's system operators with the ability to dispatch resources as required to meet load as well as to address reliability needs through their use as ancillary services. The proposal evaluation methods and contract provisions for this approach are further described in Appendix L and Appendix C in this RFP respectively.

3.8.5 Proposals that do not include proposed revisions to the attached Model PPA shall be deemed to have accepted the Model PPA terms. Modifications to the PPA provisions previously identified in Section 3.8.4 are not allowed and such provisions will not be subject to negotiation.

3.8.6 The Company shall have the right to reject any Proposal or evaluate it unfavorably based on the nature of the exceptions to the Model PPA proposed by a Proposer.

3.9 Pricing Formula Requirements

3.9.1 Proposers may submit pricing for one or both options, as described in Section 1.2.13. Please also refer to Section 1.8:

- Proposal without a storage component
- Proposal with a storage component

3.9.2 Proposer's Response Package shall include the following pricing for each option:

- Lump Sum Payment – (\$/year) payment amount for full availability. Payment will be made in monthly increments. No escalation of the Lump Sum Payment over time will be allowed. A Proposal's Lump Sum Payment will be compared to other Proposals on a \$/MWh basis based on the NEP RFP Projection, which is the annual estimated Net Energy Production (MWh) of Facility for the term of the PPA as described further in Section 3.14.2.
 - Estimated Total Interconnection Costs (See Appendix I (Interconnection Facilities and Cost Information)). Proposers are required to include in their pricing proposal all costs for interconnection and transmission upgrades or distribution upgrades expected to be required between their Facility and their proposed Point of Interconnection (see diagrams from Tariff Rule No. 19).
- Energy Payment Price – (\$/MWh) payment for delivery of Net Energy.
- Total Project Capitalization Costs (\$) – for Self-Build Proposals only.
- Annual Revenue Requirement (\$) – for Self-Build Proposals only.
- \$/year amount per \$100,000 (lower than the estimate) of actual interconnection costs.

3.9.3 All proposal information must be independent of changes to state or federal investment tax credit policies.

3.10 Sites Identified by the Company

As an alternative to a site identified by the Proposer, the Company has identified potential Sites where landowners have expressed a willingness to negotiate a lease or

purchase of the land to support a renewable energy project. These Sites were identified through a Land Request for Information (“RFI”). Proposers will be responsible for working directly with the land owner and must secure site control with such land owner as set forth in Section 4.3 prior to submitting a Proposal. Additional information about the sites identified in the Land RFI were provided to interested parties that signed Land RFI NDAs. Land RFI information remains available to other interested parties that sign the Land RFI NDA. The Land RFI is further described in Appendix G.

3.11 Project Description

3.11.1 Proposers must agree to provide all information pertaining to the design, development and construction of the Interconnection Facilities as specified in Appendix B (Proposer’s Response Package), including, but not limited to, the following:

- Proposed interconnection point;
- Site Plan including any line extension;
- Single line and three line diagrams with a wet stamp by a registered Professional Engineer in Hawai‘i;
- Details of major equipment, including performance specifications;
- Projected hourly annual energy production profile¹³ of Facility (8760 hours/year);
- Weather profile (solar resource information; wind resource information; etc.) used in arriving at Net Energy Potential information.

Proposers must also agree to provide open and complete access to their books and project financial information as described, including a Project financial pro forma with supporting documentation and proposed project finance structure in the form attached in Appendix B.

3.11.2 Proposers must also provide the following information in their Proposer’s Response Package template:

- NEP RFP Projection – estimated annual Net Energy Production (MWh) of Facility for the term of the PPA, including relevant supporting information and assumptions used such as resource measurements, energy production studies, warranted levels of annual degradation, and related information. If a Proposal is selected to the Final Award Group and a PPA is executed by the Company and the Proposer, the NEP RFP Projection will be further evaluated at several steps throughout the process as set forth in the Model PPA and adjustments to the Lump Sum Payment will be required to be made accordingly. After the Facility has achieved commercial operations, baseline performance metrics will be established. The performance of the Facility will be assessed on a continuing basis.

¹³ The projected hourly annual energy production profile shall be the projected output from the generating facility without curtailment and before any energy is directed to an energy storage facility, if one will be provided.

- A Self-Build Proposal shall also provide revenue requirements for the term of the PPA.

3.11.3 Proposer agrees that no material changes or additions to Facility from what is submitted with this Proposal shall be made without Proposer first having obtained prior written consent from Company.

3.12 Confidentiality

3.12.1 Each prospective Proposer must submit an executed NDA in the form attached hereto as Appendix F by the due date for Proposals specified in the RFP Schedule in Section 3.1. The form of the NDA is not negotiable. Information designated as confidential by the Company will be provided on a limited basis and only those prospective Proposers that have submitted an executed NDA will be considered.

3.12.2 Proposers must clearly identify all confidential information in their Proposals. However, Proposers should take care to designate as confidential only those portions of their Proposals that genuinely warrant confidential treatment. The Company discourages the practice of marking each and every page of a Proposal as “Confidential.” The Company will make reasonable efforts to protect any such confidential information that is clearly marked as “Confidential.” The Company reserves the right to share any information, even if marked Confidential, to its agents or contractors for the purpose of evaluating the Proposal, as set forth in the NDA.

3.12.3 The Company will request that the PUC issue a Protective Order to protect confidential information provided by Proposers to the Company. A copy of the Protective Order, once issued by the PUC, will be provided to Proposers. Proposers should be aware that the Company may be required to share certain confidential information contained in Proposals with the PUC, the Division of Consumer Advocacy, State of Hawaii Department of Commerce and Consumer Affairs, and the parties to any docket instituted by the PUC, provided that recipients of confidential information have first agreed in writing to abide by the terms of the Protective Order. Notwithstanding the foregoing, no Proposer shall be provided Proposals from any other Proposer or any other information contained therein or provided by or with respect to any other Proposer, except as expressly stated herein with respect to the Self-Build Option and the Best and Final Offer.

3.13 Credit Requirements Under the PPA

3.13.1 Proposers with whom the Company concludes contract negotiations of a PPA are required to post Development Period Security and Operating Period Security as set forth in the Model PPA, attached as Appendix C.

3.13.2 The Development Period Security and Operating Period Security identified in the Model PPA are minimum requirements. Proposers may not propose an amount lower than set forth in the Model PPA.

- 3.13.3 Proposer shall be required to provide a satisfactory irrevocable standby letter of credit in favor of the Company to secure Proposer's payment of all Company-Owned Interconnection Facilities costs which are payable to Company as described in Appendix G of the Model PPA.
- 3.13.4 Proposer may be required to fund a monetary escrow account in lieu of the required Source Code Escrow required under Attachment B of the Model PPA.

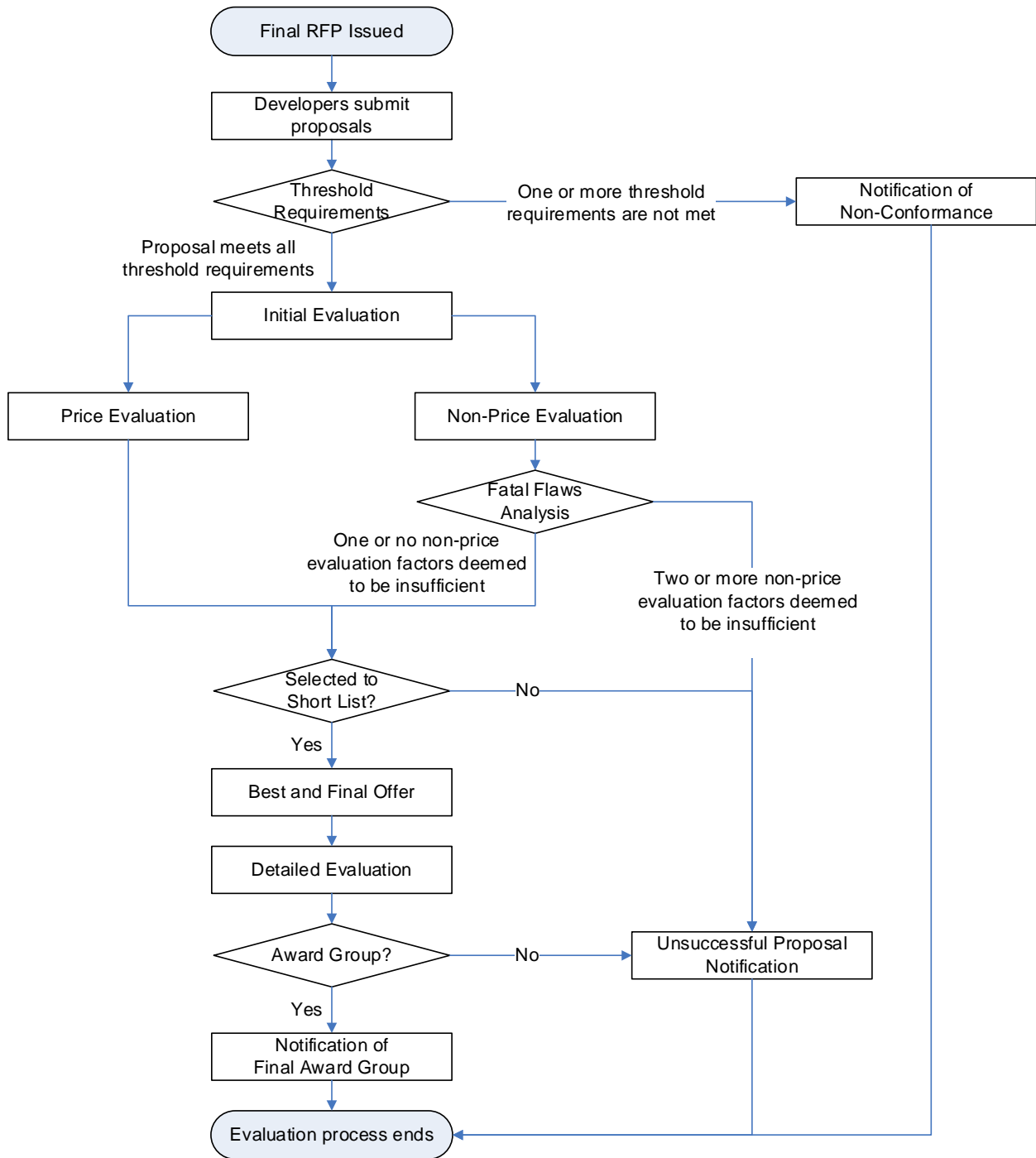
Chapter 4: Evaluation Process and Evaluation Criteria

4.1 Proposal Evaluation and Selection Process

The Company will be employing a multi-step evaluation process. Once the Proposals are received, the Proposals will be subject to a consistent and defined review, evaluation and selection process. This Chapter will provide a description of each step of the process along with the requirements of Proposers at each step. Figure 1 sets forth the flowchart for the proposal evaluation and selection process.

Upon receipt of the Proposals, the Company will ensure that the Proposals meet the Eligibility Requirements, and if so, review the Proposals to ensure that the Threshold Requirements have been met. Proposals that have successfully passed the initial eligibility and threshold criteria will then enter a two-phase process for Proposal evaluation, which encompasses the development of a Short List and then an evaluation of the selected Short List Proposals based on Best and Final Offers.

Figure 1 – Evaluation Workflow



4.2 Eligibility Requirements

Upon receipt of the Proposals, each Proposal will be reviewed to ensure that it meets the following Eligibility Requirements. Failure to meet any of these requirements could lead to disqualification of the Proposal from further review and evaluation.

- The Proposal must be received on time.
- The Proposal Fee must be received on time.
- The Proposal must not contain material omissions.
- The Proposal must be signed and certified by an officer or other authorized person of the Proposer.
- There must not have been, in the Company's sole determination, illegal or undue attempts by or on behalf of the Proposer or others to influence the Proposal review process.
- The Proposal must not contain misrepresentations.
- Proposers have fully executed the agreements or other documents required pursuant to this RFP.
- Proposer provides a certificate of good standing from the State of Hawai'i Department of Commerce and Consumer Affairs.
- Proposer provides Federal and State tax clearance certificates for Proposer.
- The Proposal is not contingent upon changes to existing county, state or federal laws or regulations.
- Proposed Project is located on the Island of O'ahu.

4.3 Threshold Requirements

Proposals that meet all the Eligibility Requirements will then be evaluated to determine compliance with the Threshold Requirements, which have been designed to screen out proposals that are insufficiently developed, lack demonstrated technology or will impose unacceptable financial accounting consequences for the Company. Proposers should provide explanations and supporting information as to how and why it believes the Project they are proposing meets each of the Threshold Requirements. The Threshold Requirements for this RFP are the following:

- **Site Control**

The Proposal must demonstrate that the Proposer has Site Control for all real property required for the successful implementation of a specific Proposal at a site not controlled by the Company, including any Interconnection Facilities for which the Proposer is responsible. The need for a firm commitment is necessary to ensure that Proposals are indeed realistic and can be relied upon as the Company moves through the remainder of the RFP process. To meet this Site Control requirement, Proposers must either provide:

 - documentation indicating that they own the Site on which the Project will be situated;
 - hold a leasehold interest in the Site for a term at least equal to the term of a 20 year PPA (taking into account the timelines set forth in this RFP from

- selection, negotiation and execution of a PPA, and PUC approval of a PPA);
or
- have an executed option agreement to purchase the Site or to lease the Site for a term at least equal to the term of a 20-year PPA. This option agreement does not need to be exclusive to the Proposer at the time the Proposal is submitted, but may be contingent upon selection of the Proposal to the Final Award Group.

Where government or publicly-owned lands are part of the Site or are required for the successful implementation of the Proposal, the Proposer must provide a credible and viable plan, including evidence of any steps taken to date, to secure all necessary Site Control for the Proposal, including securing necessary and appropriate permits, approvals, rights-of-way, access and other appurtenances necessary for the project, including but not limited to evidence of sufficient progress toward approval of the government agency or other body with authority to grant such approval (as demonstrated by records of the agency). Proposals that do not demonstrate Site Control will be rejected.

If the Threshold Requirement for Site Control is met, Site Control will be further evaluated as a part of the Non-Price evaluation. See Section 4.4 below.

- **Performance Standards**

The proposed Facility is able to meet the Performance Standards identified in this RFP and the Model PPA. Additional Performance Standards may be required based on the results of the IRS.

- **Proven Technology**

The Company will only consider Proposals utilizing technologies that have been sufficiently proven in multiple commercial applications as the scale being proposed. Technologies proposed in this RFP are required to be of a “bankable” grade asset class.¹⁴ Proposals should include any supporting information for the Company to assess the commercial and financial maturity of the technology being proposed.

- **Experience of the Proposer**

The Proposer, its affiliated companies, partners, and / or contractors and consultants on the Proposer’s Project team shall have experience in the development and operation of at least one (1) electricity generation project similar in size, scope, and structure to the Project being proposed by Proposer. The Company will consider a Proposer to have reasonably met this Threshold Requirement if the Proposer can provide sufficient information to demonstrate that the member of the project team whose experience is

¹⁴ An asset is considered “bankable” (i.e. financial investors view the technology risk as very low) if it has known standards, known performance expectations and appropriate warranties. Vendor capabilities (including both technology vendors and specifying vendors), pricing, and other market forces drive market uptake (i.e. “demand pull”).

being identified to meet this threshold criterion has a firm commitment to provide services to the Proposer.

- **Financial Compliance**

This Project must not cause the Company to be subject to consolidation and capital lease treatment as set forth in Financial Accounting Standards Board (“FASB”) Accounting Standards Codification Topic 810 (“Consolidation”) and 840 (“Leases”), respectively, as issued and amended from time to time by FASB. Proposers are required to state to the best of their knowledge, with supporting information to allow the Company to verify such conclusion, that the proposal will not: (1) trigger a capital lease accounting treatment under FASB ASC 840 or; (2) result in the Seller under the PPA being a Variable Interest Entity (“VIE”) that would trigger consolidation of the Sellers’ finances on to the Company’s financial statements under FASB ASC 810. The Company will perform a preliminary consolidation and capital lease assessment based on the Proposals received. If the Company believes that the Proposal may be subject to such treatment, it will inform the Proposer and either may request additional information or work with the Proposer to structure its agreement to avoid the capital lease and consolidation treatment. The Company reserves the right to allow a Proposal to proceed through the evaluation process through selection of the Short List and work with the Proposer on this issue. If the Company believes, in its discretion, that the Company and the Proposer cannot resolve consolidation and capital lease issues during the RFP process, the Company reserves the right to reject the Proposal as nonconforming to the Threshold Requirements. A final consolidation and capital lease assessment will be performed prior to execution of a PPA.

- **Credit / Collateral Requirements**

Proposers shall agree to post Development Period Security and Operating Period Security as set forth in Section 3.13 (Credit Requirements Under the PPA) of this RFP.

- **Available Circuit Capacity**

The output capacity of the Proposed project must not exceed the available capacity of the circuit to which it will interconnect. Circuit available capacity information should be confirmed with the Company during project-specific discussions regarding interconnection feasibility.

- **Financial Viability of Proposer**

Proposers shall provide evidence that the Proposer has the financial resources and financial strength to complete and operate the project as planned. Proposers must demonstrate they have completed a sufficient degree of planning and due diligence on how the proposed Project is to be financed by submitting a financing plan, as well as describing their experience in successfully financing electrical generation projects, as described in Appendix B.

- **Guaranteed Commercial Operations Date**

The project's Guaranteed Commercial Operations Date shall be no later than December 31, 2022. This date will be a Guaranteed Milestone in Attachment K to the Model RDG PPA.

Proposers should provide a description of the Project and an explanation as to how and why the project meets the Threshold Requirements in its submission.

4.4 Initial Evaluation – Price and Non-Price Analysis

Proposals that meet the Threshold Requirements will then be subject to a price and non-price analysis. The results of the price and non-price analysis will be a relative ranking and scoring of all eligible proposals. Price-related criteria will account for SIXTY PERCENT (60%) of the total score and non-price-related criteria will account for FORTY PERCENT (40%) of the total score. This 60% price-related criteria / 40% non-price criteria weighting is consistent with previous RFPs.¹⁵ The criteria and methodology for applying the criteria are explained below and in Appendix L.

Appendix L (Selection Criteria) of this RFP provides the components of the price and non-price evaluation criteria that will be included in the initial evaluation, but is not necessarily an exhaustive list of all criteria that may be considered.

The Company will employ a closed bidding process for this solicitation in accordance with Part IV.H.3 of the Framework where neither the specific weights of the non-price evaluation criteria nor the price and non-price evaluation models to be used will be provided to Proposers. However, the Company will provide the Independent Observer with all necessary information to allow the Independent Observer to understand the evaluation models and to enable the Independent Observer to observe the entire analysis in order to ensure a fair process. The evaluation models will be finalized prior to receipt of Proposals.

4.4.1 Initial Evaluation of the Price Related Criteria

As an initial filter before additional evaluation is performed, using the provided Lump Sum Payment (\$/month), Energy Payment Price (\$/MWh), and the NEP RFP Projection (MWh) information defined in Section 3.11.2 of the RFP, an equivalent energy price (\$/MWh) will be calculated for each Proposal. Equivalent energy pricing for self-build proposals will be determined from the Total Project Capitalization Costs and the NEP RFP Projection.

In the initial evaluation of proposals for a variable generation resource-only compared with proposals for a variable generation resource coupled with energy storage, the Company will adjust the variable generation resource-only bid by adding the cost of an energy storage facility of the size described in Section 1.2.13 above. This will enable the Company to compare proposals on an equal basis. The Company will then rank Proposals from lowest equivalent

¹⁵ Including the evaluation weighting in the Company's Docket No. 2013-0156 Waivers from the Framework for Competitive Bidding.

energy price to highest equivalent energy price. Clear outliers will be eliminated from further consideration in Stage 1 of the overall RFP process. Further evaluation will then be performed by using production simulations to assess the effects both types of projects may have on grid operations. These effects will be evaluated in determining which type of project would produce greater benefits for customers.

One of the key pricing related considerations will be the extent to which customers' bills will be impacted by integration of the proposed project onto the system. The proposed project that provides the greatest bill savings on a particular circuit will advance to the next step in the evaluation process. A proposed project with the lowest equivalent energy price may not necessarily result in the largest customer bill reduction as factors such as project size and energy output profile may influence the customer bill impact calculation. Production simulations will be performed to determine how the overall system will behave when the proposed project is integrated onto the system. The production simulation results and calculations of total resources costs over the long-term will be used to estimate impacts on customer bills. The proposed projects will then be ranked from highest to lowest customer bill reduction. A project's impact on changing long-term total resource costs may be used as an indicator of customer bill impacts.

4.4.2 Initial Evaluation of the Non-Price Related Criteria

For the non-price analysis, each Proposal will be evaluated on each of the non-price criteria set forth in Appendix L. During the non-price criteria evaluation, a fatal flaws analysis will be conducted such that any Proposal that is deemed to not meet the minimum standard level for two or more of the non-price criteria will be disqualified. The minimum standard level for each non-price criteria is defined in Appendix L. The Company will then rank Proposals using the score received and weighting assigned for each evaluation criteria and award evaluation points in accordance with the relative rankings.

4.5 Selection of the Short List

At the conclusion of both the price and non-price analysis, a total score will be calculated for each Proposal using the 60% price-related criteria / 40% non-price criteria weighting outlined above. Proposals will then be grouped according to the circuit to which the proposed Project will interconnect. In order to minimize the complexities associated with studying the cumulative effects and interdependencies of multiple projects on a circuit, only the highest scoring Projects (one with storage and one without storage) per circuit will be eligible to advance to the Short List.

The Company will select a Short List from the highest-scoring Proposals submitted per circuit. While the total price and non-price rankings will serve as the basis of evaluation, the Company reserves the right to select a Short List that could include a diversity of resource characteristics, project types, and other options. The Company reserves the right to determine the number of projects selected to the Short List. Proposals that are not included on the Short List will be released when the Short List is established. All other Proposals must remain valid through the selection of the Final Award Group, and if included in the Final Award Group, through the signing of a PPA for the Project and approval of the PPA by the PUC.

4.6 Best and Final Offer

4.6.1 The Company will solicit a Best and Final Offer from Proposers selected to the Short List. Proposers will have the opportunity to update (downward only) the following pricing elements of their Proposal:

- Lump Sum Payment (\$/year) amount
- Energy Payment price (\$/MWh) amount

4.6.2 If a Proposer does not modify its Proposal, the original Proposal will be deemed its Best and Final Offer.

4.6.3 Proposers will not be allowed to increase the pricing in their Proposals to address interconnection and/or system upgrade costs or for any other reason.

4.6.4 If selected to the Short List, the Self-Build Option, will also have the same opportunity to provide a Best and Final Offer in accordance with the terms of this RFP. The Best and Final Offer for the Self-Build Option will be due prior to the Best and Final Offers for all other Proposers, as specified on Table 1.

4.7 Detailed Evaluation

The Best and Final Offers of the Short Listed Proposals will be further analyzed, as described in Appendix L, to determine the optimal portfolio of Proposals for the Company system's needs as identified for the island of O'ahu in the Company's PSIP Update: December 2016, subject to any limitations provided in this RFP. Every Proposal on the Short List will not necessarily be included in the final optimized portfolio of Proposals.

4.8 Selection of the Final Award Group

Based on the results of the Detailed Evaluation and review with the Independent Observer, the Company will select a Final Award Group from which to begin contract negotiations. The Company intends to select two (2) Projects in this Stage 1 RFP. All Proposers will be notified at this stage of the evaluation process whether their Proposal is included in the Final Award Group. However, Proposal evaluation results and rankings will not be disclosed to the Proposers in the Final Award Group. Selection to the Final Award Group and/or entering into contract negotiations does not guarantee execution of a PPA. Any project not selected to the Final Award Group may resubmit their projects in Stage 2 of this RFP or in a subsequent RFP.

Chapter 5: Post Evaluation Process

5.1 Interconnection Requirements Study

The Company will complete Interconnection Requirements Studies for the Proposals selected to the Final Award Group to assess the costs of system upgrades necessary to integrate the Projects into the Company System. Submission of Facility models and documentation required to perform the IRS is required at Proposal due date. Proposers must be prepared to provide, any additional data necessary for the IRS within fifteen (15) days of request. Failure to provide all

requested material within the time specified, or changes to the data provided after the deadline, is grounds for elimination from the Final Award Group. Proposer will pay for the cost of the IRS, which will take into consideration other Proposals selected to the Final Award Group. The IRS provides information including, but not limited to, an estimated cost for required Interconnection Facilities for a particular Project and mitigation measures. Proposer will be responsible for the actual final costs of all Seller-Owned Interconnection Facilities and Company-Owned Interconnection Facilities. No upward adjustments to pricing will be permitted as a result of the actual final costs. However, there may be downward adjustments to the pricing as a result of a lower estimated cost for required Interconnection Facilities previously provided for a particular Project. Proposer will have the opportunity to terminate the PPA in the event that the actual final costs are higher than the estimate provided by the Company. See Section 12.4 of the Model RDG PPA.

All Proposals selected to the Final Award Group will require a new IRS, including any Proposal at a Site where an IRS might have been previously performed in connection with other RFPs or proposed PPAs.

5.2 Contract Negotiation Process

Proposers selected for the Final Award Group will be required to indicate, in writing, to the Company's primary contact for this RFP, whether they intend to proceed with their Proposals within five (5) business days of being notified by the Company of its intent to enter into contract negotiations. Proposers who elect to remain in the Final Award Group will be required to keep their Proposal valid through the award period. Contract negotiations will take place in parallel with the IRS process.

The Company's goal is to complete contract negotiations within four (4) months of notification of intent to enter into contract negotiations. The IRS may not be completed at such time. If this is the case, the Company intends to execute and file the PPA with the PUC for approval and later amend the PPA to include the results of the IRS.

5.3 Community Outreach and Engagement

No later than in parallel with the PPA contract negotiation process, Proposers shall at minimum conduct a public meeting in the community where the proposed Project is located, provide adequate public notice of the meeting of two weeks or more, and inform the Company of the meeting. This public meeting shall include an opportunity for stakeholders and other interested parties to learn about the proposed Project, engage in dialogue about concerns, mitigation measures and potential community benefits, and inform the community of the process and/or intent for input and engagements. Following the public meeting, the public will be allowed 30 days to submit comments to the Company. If a PPA is executed by the Proposer and the Company, the Company's application for PUC approval of that PPA will contain an attachment including those comments. Proposers must also comply with any other requirement set forth in the Model RDG PPA relating to Community Outreach.

Following submission of the PUC approval application, the Company will provide another opportunity for the public to comment on the proposed Project. The Company's statement of

position filed in the docket associated with the Project will contain an attachment including those comments.

5.4 PUC Approval of PPA

Any signed PPA resulting from this RFP is subject to PUC approval as described in the Model PPA, including Article 12 and Section 29.20 thereof.

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FOR
VARIABLE RENEWABLE DISPATCHABLE GENERATION
ISLAND OF O‘AHU

OCTOBER 23, 2017

Docket No. 2017-0352

Appendix A – Definitions



**Hawaiian
Electric**

“Best and Final Offer” or “BAFO” means the final offer from a Proposer, as further described in Section 4.6 and elsewhere in this RFP.

“Code of Conduct” means the code of conduct approved by the PUC in Docket No. 03-0372 (Decision and Order No. 23614, August 28, 2007) with respect to a Self-Build Option. An updated Code of Conduct was submitted to the PUC in Docket No. 2017-0352 on October 23, 2017.

“Commercial Operations” has the meaning set forth in the Model PPA.

“Commercial Operations Date” means the date on which a Facility first achieves Commercial Operations.

“Company” means Hawaiian Electric Company, Inc., a Hawai‘i corporation.

“Company Offered Sites” means potential sites identified by Company where landowners have expressed a willingness to negotiate a lease or purchase of the land to support a renewable energy project, as set forth in Section 3.10 of the RFP.

“Company-Owned Interconnection Facilities” has the meaning set forth in the Model PPA.

“Competitive Bidding Framework” or “Framework” means the Framework for Competitive Bidding contained in Decision and Order No. 23121 issued by the Public Utilities Commission on December 8, 2006, and any subsequent orders providing for modifications from those set forth in Order No. 23121 issued December 8, 2006.

“Consumer Advocate” means the Division of Consumer Advocacy of the Department of Commerce and Consumer Affairs of the State of Hawai‘i.

“Day” means a calendar day, unless the term “business day” is used, which means calendar day excluding weekends and federal and State of Hawai‘i holidays.

“Dispatchable” means the ability to turn on or turn off a generating resource at the request of the utility’s system operators, or the ability to increase or decrease the output of a generating resource from moment to moment in response to signals from a utility’s Automatic Generation Control System, Energy Management System or similar control system, or at the request of the utility’s system operators.

“Electronic Procurement Platform” means the third-party web-based sourcing platform that will be used in the intake of Proposals and associated electronic information, storage and handling of Proposer information, and communication.

“Eligibility Requirements” has the meaning set forth in Section 4.2 herein.

“Energy Payment Price” is the amount that the Company will pay the Seller for electric energy delivered to the Company in accordance with the terms and conditions of the Model PPA on a

monthly basis as set forth in Attachment J (Company Payments for Energy and Dispatchability) to the Model PPA. This payment will be calculated in terms of dollars per MWh.

“Facility” shall have the meaning set forth in the Model PPA.

“FASB” means Financial Accounting Standards Board.

“FASB ASC 810” means Financial Accounting Standards Board Accounting Standards Codification 810, Consolidation.

“FASB ASC 840” means Financial Accounting Standards Board Accounting Standards Codification 840, Leases.

“Final Award Group” means the group of Proposers selected by the Company from the Short List, with which the Company will begin contract negotiations, based on the results of the Company’s detailed evaluation.

“Hawaiian Electric” means Hawaiian Electric Company, Inc.

“Hawaiian Electric Companies” or “Companies” means Hawaiian Electric Company, Inc. and its subsidiaries Hawaii Electric Light Company, Inc. and Maui Electric Company, Limited.

“Hawaiian Electric System” means the electric system owned and operated by Hawaiian Electric on the island of O‘ahu (including any non-utility owned facilities) consisting of power plants, transmission and distribution lines, and related equipment for the production and delivery of electric power to the public.

“HRS” means the Hawai‘i Revised Statutes as of the date of this Request for Proposals..

“Imputed Debt” means adjustments to the debt amounts reported on financial statements prepared under generally accepted accounting principles (“GAAP”). Certain obligations do not meet the GAAP criteria of “debt,” but have debt-like characteristics; therefore, credit rating agencies “impute debt and interest” in evaluating the financial ratios of a company.

“Independent Observer” has the meaning set forth in Section 1.5 (Role of the Independent Observer).

“Independent Power Producer” or “IPP” means an entity that owns or operates an electricity generating facility that is not included in the Company’s rate base.

“Interconnection Facilities” means the equipment and devices required to permit a Facility to operate in parallel with, and deliver electric energy to, the Company System (in accordance with applicable provisions of the Commission’s General Order No. 7, Company tariffs, operational practices, interconnection requirements studies, and planning criteria), such as, but not limited to, transmission and distribution lines, transformers, switches, and circuit breakers. Interconnection Facilities includes Company-Owned Interconnection Facilities and Seller-Owned Interconnection Facilities.

“Interconnection Requirements Study” or “IRS” means a study, performed in accordance with the terms of the IRS Letter Agreement), to assess, among other things, (a) the system requirements and equipment requirements to interconnect the Facility with the Company System, (b) the Performance Standards of the Facility, and (c) an estimate of interconnection costs and project schedule for interconnection of the Facility.

“Interconnection Requirements Study Letter Agreement” or “IRS Letter Agreement” means the letter agreement and any written, signed amendments thereto, between Company and Proposer/Seller that describes the scope, schedule, and payment arrangements for the Interconnection Requirements Study.

“kV” means kilovolt.

“kW” means kilowatt.

“kWh” means kilowatt hour.

“Land Rights” means all easements, rights of way, licenses, leases, surface use agreements and other interests or rights in real estate.

“Lump Sum Payment” has the meaning set forth in the Model PPA. Also referred to as a monthly Lump Sum Payment to reflect the portion of the payment made each month.

“Mediation” means the confidential mediation conducted in Honolulu, Hawai‘i, pursuant to and in accordance with the Mediation Rules, Procedures, and Protocols of Dispute Prevention Resolution, Inc. (or its successor) or, in its absence, the American Arbitration Association then in effect.

“Model PPA” or “Model RDG PPA” means the Model Renewable Dispatchable Generation Power Purchase Agreement attached as Appendix C to this RFP.

“MW” means megawatt.

“MWh” means megawatt hour.

“NDA” means the Mutual Confidentiality and Non-Disclosure Agreement attached to this RFP as Appendix E.

“O&M” means operation and maintenance.

“Operating Period Security” has the meaning set forth in the Model PPA, Section 14.4 (Operating Period Security).

“Performance Standards” means the various performance standards for the operation of the Facility to Company specified in Section 3 (Performance Standards) of Attachment B (Facility Owned by Seller), as such standards may be revised from time to time pursuant to Article 23 (Process for Addressing Revisions to Performance Standards) of the Model PPA, and as described in Chapter 2 of this RFP.

“Point of Interconnection” has the meaning ascribed to it in the Model PPA.

“Power Purchase Agreement” or “PPA” means an agreement between an electric utility company and the developer of a renewable energy generation facility to sell the power generated by the facility to the electric utility company.

“Power Supply Improvement Plan” or “PSIP” means the Company’s Power Supply Improvement Plan.

“PSIP Update Report: December 2016” means the Company’s PSIP update filed on December 23, 2016 in Docket No. 2014-0183.

“Procedures Manual” means the manual approved by the PUC, which was put in place to address and to safeguard against preferential treatment or preferential access to information in a Hawaiian Electric RFP process. The Procedures Manual is attached as Appendix D to this RFP.

“Project” means a Facility proposed to Hawaiian Electric by a Proposer pursuant to this RFP.

“Proposal” means a proposal submitted to Hawaiian Electric by a Proposer pursuant to this RFP.

“Proposal Fee” means the non-refundable fee of \$10,000 for each proposal submitted as described in Section 1.8 (Proposal Fee) of this RFP.

“Proposer” means a person or entity that submits a Proposal to Hawaiian Electric pursuant to this RFP.

“Proposer’s Response Package” means the form in which the Proposal should be submitted, which is attached hereto as Appendix B.

“PUC” means the State of Hawai‘i Public Utilities Commission.

“Renewable Portfolio Standards” or “RPS” means the Hawaii law that mandates that the Company and its subsidiaries generate or purchase certain amounts of their net electricity sales over time from qualified renewable resources. The RPS requirements in Hawai‘i are currently codified as Hawai‘i Revised Statutes (HRS) 269-91 through 269-95.

“Request for Proposals” or “RFP” means a request for Proposals issued pursuant to a competitive Bidding process authorized, reviewed, and approved by the PUC.

“RFP Schedule” means the schedule set forth in Table 1 of this RFP.

“Self-Build Option” means a Proposal submitted by Hawaiian Electric that is responsive to the resource need identified in the RFP, as required by Section VI of the Framework..

“Self-Build Team” means agents of the Company who are developing Self-Build Option proposals.

“Seller” means the entity that the Company is contracting with, as set forth in the Model PPA.

“Seller-Owned Interconnection Facilities” shall have the meaning set forth in the Model PPA.

“Short List” means the group of Proposals selected by Hawaiian Electric as set forth in Section 4.5.

“Site” means the parcel of real property on which the Facility, or any portion thereof, will be constructed and located, together with any Land Rights reasonably necessary for the construction, ownership, operation and maintenance of the Facility.

“Site Control” has the meaning set forth in Section 4.3 herein.

“Threshold Requirements” has the meaning set forth in Section 4.3 herein.

Any capitalized term not defined in this RFP shall have the definition as set forth in the Model PPA.

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*Appendix B – Proposer’s Response Package /
IRS Data Sheet*



**Hawaiian
Electric**

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1.0 General Instructions to Proposers:

Hawaiian Electric has elected to use the services of PowerAdvocate, a third-party electronic platform as facilitator of the RFP process. All Proposals and all relevant information must be submitted via the Power Advocate platform, as is described in the Final RFP. Proposers are requested to observe response structure, file naming convention, RFP documents and submittals, as identified on the Power Advocate platform. The platform will be configured to mirror the requirements identified in Appendix B, but formatting on the platform may vary from Appendix B. If there are any discrepancies between this Appendix B and what appears on the Power Advocate platform, the Power Advocate platform will control.

Items that are not applicable to a specific Proposer or project type must be clearly marked N/A and a brief explanation must accompany each item so marked.

Proposers must clearly identify all confidential information in their Proposals, as described in more detail in Section 3.10, Confidentiality, of the RFP.

2.0 Commercial Information Requirements

2.1 Required Forms

Proposer must upload a copy of each of the completed forms.

- Mutual Confidentiality and Non-Disclosure Agreement (Appendix F to the RFP)

2.2 Proposal Summary / Contact Information

2.2.1 Project Summary

Proposer must provide the following summary information about their Proposal.

- Project Name
- Proposed Commercial Operations Date
- Proposer Entity Name
- Project City or Town

2.2.2 Project Contact Information

Proposer must provide the contact information below for Proposer's primary point of contact.

- Name
- Title
- Address
- Phone Number
- Mobile Phone Number (if different)
- Email Address

2.2.3 *Project Characteristics*

Proposer must provide the following summary information about their Proposal's characteristics.

- Gross and Net MW AC Capability of the generation facility: The net capacity (amount able to be exported to the grid) must not exceed the available capacity of the circuit to which it will interconnect. Proposers are strongly encouraged to contact the Company as described in Section 2.2.1 of this RFP to ensure the project's net capacity does not exceed the circuit's hosting capacity.
- Facility overview, including at a minimum:
 - PV
 - Number of inverters
 - Rated output of inverters (kW AC)
 - Number of PV modules
 - Rated output of PV modules (kW DC)
 - PV array design characteristics (i.e. fixed tilt, single or multi-axis tracking)
 - Wind
 - Number of turbines
 - Rated output of turbines (MW AC)
 - Storage
 - Capacity (MWh)
 - Cycling
 - Other technologies
 - Comparable information on the generating unit(s)
 - Manufacturers and model numbers for all major equipment
- Estimated Life of generation facility and interconnection facilities

2.3 **Executive Summary of the Proposal**

The Proposer is required to provide an executive summary of the Proposal. The Proposer must include an approach and description of the important elements of the Proposal consistent with, and in the order of, the sections outlined in the Table of Contents included in the Proposer's Response Worksheet. Proposer must provide sufficient information to clearly demonstrate how its Proposal conforms to the eligibility and threshold requirements specified in Sections 4.2 and 4.3 of the Final RFP.

2.4 Financial/Legal

Proposers are required to provide the following information to demonstrate the financial viability of their project:

2.4.1 Identification of Equity Participants

- Who are the equity participants in the project (or the equity partners' other partners)?
- Proposer company profile information
 - DUNS Number
 - Dun & Bradstreet Rating
 - Tax ID Number
 - If applicable, in which state was the Proposer incorporated/formed?
 - If applicable, in what year was the Proposer incorporated/formed?
 - Does the Proposer have any government ownership?
 - Certificate of Good Standing from the State of Hawai'i Department of Commerce and Consumer Affairs
 - Proposer's Federal and State tax clearance
- If the Proposer has a parent entity, please answer the questions below about the parent entity.
 - Parent entity profile information
 - DUNS Number
 - Dun & Bradstreet Rating
 - Tax ID Number
 - If applicable, in which state was parent entity incorporated/formed?
 - If applicable, in what year was parent entity incorporated/formed?
 - Does the parent entity have any government ownership?

2.4.2 Evidence that the Project will be Financed, including assumptions

- How will the project be financed?
- Is there a written commitment from the equity participants? If so, please provide a copy with confidential information redacted if necessary.
- Discuss and/or provide supporting information on any project financing guarantees.
- Does the Proposer envision any conditions precedent to project financing other than execution of the Power Purchase Agreement or any other applicable project agreements and State of Hawai'i Public Utilities Commission approval of the Power Purchase Agreement and other agreements?
 - If yes, please describe such conditions precedent to project financing and Proposer's plan to address them.

- Describe the implication of the Federal Production Tax Credits or Investment Tax Credits (or similar incentives) on the viability of the project.

2.4.3 *Proposer's Organizational Structure*

- Please provide a description of the Proposer's organizational structure and associated responsibilities on the project from a financial and legal perspective, including any general and limited partners, providers of capital, and percentage interest of each party.

2.4.4 *Approach and Plan for Project Financing*

- Provide a financing plan for the project, including construction and term financing. The financing plan must address at a minimum:
 - The project's projected financial structure;
 - Expected sources of debt and equity financing;
 - Estimated development and capital costs; and,
 - Evidence the project is financeable.
- Proposer is required to state to the best of its knowledge, and provide supporting information to allow Hawaiian Electric to verify such conclusion, that its Proposal will not (1) trigger a capital lease accounting treatment under FASB ASC 840 or (2) result in a Developer being a Variable Interest Entity (as defined in FASB ASC 810) that would trigger consolidation of such party's finances onto Hawaiian Electric's financial statements under FASB ASC 810.

2.4.5 *Project Financing Experience of the Proposer*

- Provide documentation illustrating the experience of the Proposer in securing financing for projects of similar size and technology. For each project provide the following information:
 - Project name and location
 - Project type and size
 - Date of construction and permanent financing
 - Commercial Operations Date
 - Proposer's role(s) in financing of project.
 - Off-taker, term of interconnection agreement, financing structure, and major pricing terms.

2.4.6 *Evidence of the Proposer's Financial Strength*

Hawaiian Electric reserves the right to request additional financial documents and bank references, as needed.

- Provide evidence that the Proposer has the financial resources and financial strength to complete and operate the project as planned.
- Please submit Proposer's audited annual reports (from legal entity and parent company) containing the balance sheets, income statement, and statement of cash flows for the three (3) most recent fiscal years and quarterly report for the most recent quarter ended.

- Please list the current credit rating from Standard & Poor's, Moody's, and Fitch for the Proposer, affiliates, partners, and credit support provider.

2.4.7 *Evidence that the Proposer can Provide the Required Securities*

- The Proposer must demonstrate its ability (and/or the ability of its credit support provider) to provide the required securities, including its plan for doing so (including type of security, sources of security and a description of its credit support provider).
- Provide a description of any current credit issues regarding the Proposer or affiliate entities raised by rating agencies, banks, or accounting firms.
- Proposers must agree to provide Development Period Security and an Operating Period Security as set forth in the Model PPA.

2.4.8 *Disclosure of Litigation and Disputes*

- Proposers must disclose any litigation, disputes, and status of any lawsuits or dispute resolution related to projects owned or managed by them or any of their affiliates.

2.4.9 *Financial Pro Forma*

- Provide pro forma income and cash flow statements conforming to Generally Accepted Accounting Principles for the project for the term of the proposed in the provided template.

2.5 **Redline Version of the Form Agreements**

To the extent a Proposer takes any exceptions to the form agreements applicable to its Proposal, such Proposer is required to upload redlined versions in Microsoft Word format of the applicable documents. This includes the Model Power Purchase Agreement (PPA) (Appendix C to the Final RFP)

In the event the Proposer does not upload redlines of the applicable form agreements, Hawaiian Electric will assume the terms in such form agreements are agreeable to the Proposer.

2.6 **Environmental and Land Use Permits**

This section addresses environmental, social, and land use issues associated with project(s) siting and operations. The purpose of this section is to identify environmental, social, and land use planning, permitting, and approval requirements, long and short term impacts, and measures that may be required to mitigate these impacts.

- Identify and explain any State Land Use Reclassifications necessary for Proposal siting and operations, and the associated processing/approval timeframes.
 - Provide a description of the current or previous use of the site
- Identify all required discretionary and non-discretionary land use and environmental permits and approvals required for development, financing, construction and operation of the Proposal, including but not limited to zoning changes, Environmental Assessments and/or Environmental Impacts Statements.
 - Provide a listing of Federal, State, and Local agencies and authorities having jurisdiction over the issuance of such permits and approvals.
 - Provide an overall land use and environmental permits and approvals strategy and approach to obtaining successful positive results from the agencies and authorities having jurisdiction.

- Proposers must provide a preliminary environmental assessment of the site, which includes the identification and analysis of potential short and long term impacts associated with the Proposal – including direct, indirect, and cumulative impacts associated with development, construction, operation, and maintenance. If alternatives have been or will be considered, those should be discussed. The assessment shall also include Proposer’s short and long term plans to mitigate such impacts and an explanation of the mitigation strategies for, but not limited to, each of the major environmental areas as presented below:
 - Soils
 - Topography and geology
 - Solid waste
 - Hazardous waste
 - Natural habitats and ecosystems
 - Flora/Fauna/vegetation
 - Noise (during construction and operation)
 - Other natural resources
- Proposers must also provide a preliminary assessment of other potential short and long term impacts resulting from the Proposal – including direct, indirect, and cumulative impacts associated with development, construction, operation, and maintenance. The assessment shall include an identification and analysis of impacts, including, but not limited to, the areas listed below. If alternatives have been or will be considered, those should be discussed. The assessment shall also include an explanation of mitigation strategies for identified impacts. Where further assessment, permits, and approvals are required, those should be identified, along with the agency with jurisdiction over any required permits or approvals.
 - Existing and surrounding land uses
 - Area businesses and residences
 - Cultural / Historical resources¹
 - Archaeological sites
 - Aesthetic/visual
- Proposers are required to provide conceptual plans for siting, studies/assessments, permits, and approvals, including a schedule which identifies the sequencing of activities and critical path.
 - A narrative explaining the basis for the assumed timeline shall also be provided. In addition, Proposers shall also describe situations where a planning, permit, or approval process for one

¹ Detail the potential impacts of the Proposal on cultural resources in the short and long term and the Proposer’s plan to mitigate such impacts. In seeking certain state land use approvals, Hawai‘i law (HRS § 343) requires parties to identify (1) valued cultural, historical, or natural resources in the area in question, including the extent to which traditional and customary native Hawaiian rights are exercised in the area; (2) the extent to which those resources -- including traditional and customary native Hawaiian rights -- will be affected or impaired by the proposed action; and (3) the feasible action, if any, to be taken to reasonably protect native Hawaiian rights if they are found to exist. Proposers must provide as much information as possible to allow Hawaiian Electric to understand the considerations.

aspect of the total project may influence the timing for other aspects of the project (*e.g.*, a case where one permit is contingent upon completion of another permit or license).

- Proposers are required to provide a decommissioning plan, including:
 - Programs for recycling of installed infrastructure, if any, and
 - Demonstration of how restoration of the Site to its original ecological condition is guaranteed in the event of default by the Proposer in the applicable Site Control documentation.

2.7 **Community Outreach and Community Benefits Plan**

- Identify a detailed plan for community outreach and communications to gain support for or acceptance of the proposed project, which must include the Proposer's plan for working with the community during project development and construction to provide project information and address local or community issues. The plan should address, but not be limited to, the following items:
 - Identify communities and other stakeholders that may be affected by the proposed project. How will they be affected? What mitigation strategies will the Proposer implement?
 - How will affected communities and the general public be informed about the proposed project? Describe, at a minimum, the frequency of communication, source of information, and outlets utilized.
 - Will the affected communities and the general public be given an opportunity to provide the developer with feedback and comments on the proposed project? What will the developer do with the feedback and comments received?
- Provide any documentation of local community support or opposition including any letters from local organizations, newspaper articles, or communications from local officials.
- Provide a description of community outreach efforts already taken or currently underway.
- Identify any anticipated or negotiated investment in the community and other community benefits that Proposer proposes to provide in connection with the project, along with an estimated value of the community benefits in dollars (including the cost to Proposers providing the benefits and details to support how those costs were developed).

3.0 **Technical Information Requirements**

3.1 **Project Operational Requirements – Generation**

Proposers must provide the following information regarding the project operational parameters for proposed renewable generation. If not applicable to the specific technology, the Proposer must respond with an N/A.

3.1.1 *Design and Operating Information*

- Provide a project design description, including configurations and maps
- RFP NEP Projection (MWh): The estimated annual net energy that could be produced by the facility and delivered to the Point of Interconnection over a ten year period with a probability of exceedance of 95%
- A description of the resource data used in developing the RFP NEP Projection to include at a minimum, the data source(s) including any resource assessment studies prepared by independent consultants,

location(s) that were analysed as they relate to the proposed project site, the resolution of the data, the accuracy of any measurement instrumentation, and the duration of the data collection.

- Hourly 8760 (24 hours x 365 days) generation profile for the provided RFP NEP Projection

3.1.2 *Auxiliary Power Information*

- Proposer must list the maximum auxiliary power requirements for:
 - Start-up
 - Normal Operations (from generator)
 - Normal Operating Shutdown
 - Forced Emergency Shutdown
 - Maintenance Outage

3.1.3 *Capability of Meeting Performance Standards*

The Proposer shall confirm that the proposed generation facility can comply with the Performance Standards contained in Section 3 of Appendix B to the Model PPA (Appendix C to the Final RFP). To the extent the Performance Standards cannot be achieved, the Proposer must specify and provide an explanation of why they cannot be met. Alternately, provide the Proposer's ability to exceed the Performance Standards and explain with detail and basis.

3.1.4 *Coordination of Operations*

- Provide a description of the control facilities required to coordinate generator operation with and between the Hawaiian Electric System Operator and the Hawaiian Electric System.
 - Provide a description of the equipment and technology used facilitate dispatch by Hawaiian Electric and communicate with Hawaiian Electric.
- Include a description of the control and protection requirements of the generator and the Hawaiian Electric System.

3.2 **Engineering and Technology**

Proposals must utilize technologies that have been sufficiently proven in multiple commercial applications at the scale being proposed. To this end, proposals must demonstrate that this requirement is met by providing examples of the technology and equipment being proposed having been used in other commercial applications at the scale being proposed.

3.3 **Project Management / Experience**

Proposers are required to demonstrate project experience and management capability to successfully develop and operate the project proposed. Hawaiian Electric is interested in a project team that has demonstrated success in

projects of similar type, size, and technology and can demonstrate an ability to effectively work together to bring the project to commercial operation in a timely fashion.

- Provide an organizational chart for the project that lists the project participants and identifies the management structure and responsibilities. For each of the project participants (including the Proposer, partners, and proposed contractors), provide statements that list the specific experience of the firm in: developing, financing, designing, constructing, owning, operating, and maintaining renewable energy generating facilities, or other projects of similar type, size and technology, and any evidence that the project participants have worked jointly on other projects.
- Identify those member(s) of the team the Proposer is submitting to meet the experience Threshold Requirements and demonstrate the member(s) firm commitment to provide services to the Proposer.
- Identify those members of the team with experience and qualifications including affiliates, and their principal personnel who will be involved in the project contracting to sell and deliver energy. If the Proposer consists of multiple parties, such as joint ventures or partnerships, provide this information for each party, clearly indicating the proposed role of each party, including an ownership chart indicating direct and indirect ownership, and percentage interests in the partnership or joint venture
- Provide a management chart which lists the key personnel dedicated to this project and provide biographies / resumes of the key personnel, including position, years of relevant experience, and similar project experience. Provide specifics as they relate to financing of renewable energy projects. Identify architects and engineers or provision to provide same that are licensed to practice in the State of Hawai‘i.
- Provide a listing of all photovoltaic, wind or other renewable energy projects the Proposer has successfully developed or that are currently under construction. Describe the Proposer’s role and responsibilities associated with these projects (lead developer, owner, investor, etc.). Provide the following information as part of the response:
 - Name of the project
 - Location of the project
 - Project type, size and technology
 - Commercial operation date
 - Offtaker (if applicable)
 - Current ownership
 - References with contact information(name, address, phone number, and relationship with the Proposer and with the related project

3.4 **Siting**

Proposer’s are required to address the following with respect to siting and right-of-way issues.

- Demonstrate how the Proposer has met the Threshold Site Control, identified in RFP Section 4.3 Threshold Requirements.
- Provide a Tax Map Key (“TMK”) map of the Generator site that clearly identifies the location of the site, the total acreage, the Point of Interconnection, and the relationship of the site to other local infrastructure.

In addition to providing the required map, provide a site layout plan which illustrates the proposed location of all equipment and facilities on the site.

- Provide a detailed description including site sketches of how the facility will be interconnected to the Hawaiian Electric System (above-ground or underground) and a description of the rationale for the interconnection route.
- Identify whether the site and interconnection route are near cultural resources and implications for project completion and mitigation strategies.
- Provide evidence that the site and interconnection route are properly zoned. If they are not currently zoned properly, identify present and required zoning and/or land use designations and provide a permitting plan and timeline to secure the necessary approvals.
- Identify any rights-of-way or easements that are required for access to the site or for interconnection route. Describe the status of rights-of-way and easement acquisition, and describe the plan for securing the necessary rights-of-way, including the proposed timeline.

3.5 **Project Schedule and Construction Execution Plans**

- Proposers are required to provide a project schedule in MS Project GANTT chart format with complete critical path activities identified for the Proposal from the Notice of Selection of the Proposal for contract negotiation to the start of Commercial Operations. The schedule must include permitting, interconnection, and all other important elements outside of the direct construction of the project. For each project element, list the start and end date. Proposers must also list and describe critical path activities and milestone events, particularly as they relate to the integration and coordination of the project components and Hawaiian Electric System.
 - Proposers must ensure that the schedule provided in this section is consistent with the milestone events contained in the PPA and/or other agreements.
 - Identify the elements on the critical path. The schedule must include, at a minimum, facility contracts, construction, siting, environmental permitting (anticipated submittal and approval), cultural resource implications and mitigation plans, community outreach plan, energy resource assessment, financing, engineering, procurement, local permits and any other requirements that could influence the project schedule, and the Commercial Operations Date. The project schedule must include dates for submittal of engineering and design for review and approval, all construction management events and construction and applicable reporting milestone events specified in the Model PPA and/or other agreements.
 - Proposer must provide the construction execution strategy. This must include identification of contracting/subcontracting plans, modular construction, safety plans², quality management plan, labor availability, likely manufacturing sites and procurement plans, and similar projects where these construction methods have been used by the Proposer.
- Proposers should provide a description of any project activities that have been performed to date

² A document that describes the various safety procedures and practices that will be implemented on the project and how applicable safety regulations, standards, and work practices will be enforced on the project.

Generator Proposal

- Provide a scope of work of all required interconnection facilities, consistent with the provisions included in Attachment B and Attachment G to the Model PPA (Appendix C to the RFP)
- Single-Line Diagram – The Proposer shall provide preliminary single-line diagram(s) for the generation and interconnection facilities as described below.
 - a. The single-line diagram(s) should include:
 - i. Transformers - for main and generator step up transformer(s), show:
 - 1. Transformer voltage and MVA ratings.
 - 2. Transformer impedance(s).
 - a. Transformer winding connections and grounding. If neutrals are grounded through impedance, show the impedance value.
 - ii. Breakers:
 - 1. Proposed technology
 - 2. Voltage, continuous current and interrupting capability ratings.
 - 3. The trip speed (time to open)
 - iii. The protective relaying and metering for the generators, buses, and all other main substation equipment.
 - iv. For the potential transformers, indicate the type, quantity, ratio, and accuracy rating.
 - v. For the current transformers, indicate the type, quantity, ratio, and accuracy rating, and thermal rating factor.
 - vi. Auxiliary power devices (e.g. capacitors, reactors, storage systems, etc.) and their rating(s); additional inquiries may be made to obtain technical data for these devices.
 - vii. The generator(s) voltage, impedances, and MVA ratings.
 - viii. The generator grounding method. If the generator is not solidly grounded, provide the grounding method details and equipment ratings.
 - ix. Stamp by a registered Professional Engineer in the State of Hawai‘i.
 - b. Forecasting and monitoring equipment and communication interface
 - i. Site map
 - ii. Power schematic diagram(s)
 - iii. Communication interface block diagram, including primary and backup communication
- Proposer shall provide a plan map of the facilities with location identified by the O‘ahu Tax Map Key map, preliminary footprint dimensions and layout, renewable generator interconnection, as well as the Hawaiian Electric substation proposed for interconnection to the Hawaiian Electric System.

- Provide a description of the Proposer’s interconnection plan including routing and a description of overhead (above-ground) and/or underground facilities, including elevations/depth, style of tower or description of buried cable construction, materials and protection,.
- Provide a list of the major materials for the proposed interconnection plan, including:
 - For new lines – poles, conductors, cables, cable splices, and cable terminators;
 - For new switching station(s) - circuit breakers, bus conductors, and protective relays; and,
 - For communication facilities - fiber optic cables and microwave equipment.
- Proposers must identify the time requirements estimated to interconnect the project to the Hawaiian Electric System.

3.6 **Operation and Maintenance**

Operations and maintenance is as an important element of successful project operations. Hawaiian Electric is interested in projects that can demonstrate that the maintenance plan will ensure reliable operations during the term of the contract.

- Provide an operation and maintenance plan for the project that demonstrates the long term operational viability of the proposed project. The plan must include a discussion of the staffing levels proposed for the project and location of such staff, the expected role of the Proposer (Owner) or outside contractor, scheduling of major maintenance activity, maintenance funding levels, and the plan for testing equipment. Also state whether the Proposer would consider 24-hour staffing, explain how this would be done, and identify any cost impacts that are not included in the Proposal.
- Describe the Proposer’s contingency plan, including the Proposer’s mitigation plans to address failures. Such information should be described in the proposal to demonstrate the project’s reliability with regard to potential operational issues.
- Indicate whether or not the project sponsor is willing to coordinate the maintenance schedule for the project with the annual maintenance schedule of Hawaiian Electric.
- Describe the status of the Proposer in securing any operation and maintenance agreements or contracts. Include a discussion of the Proposer’s plan for securing a long-term operation and maintenance contract.
- Provide examples of the Proposer’s experience with operation and maintenance services for other similar projects.

4.0 Pricing Information

- Lump Sum Payment - (\$/month) the payment to be made by Company to Seller in exchange for Seller making the Net Energy Potential of the Facility available for dispatch by Hawaiian Electric
- Lump Sum Payment sensitivity for a \$100,000 difference in assumed Interconnection Costs – (\$/month per \$100,000 reduction in Interconnection Costs)
- Variable Price - (\$/MWh) payment for electric energy delivered to Hawaiian Electric

FOR PV GENERATION

PROJECT:

DATE:

Preliminary

Interconnection Requirement Study - Data Request

(Nonexclusive Preliminary List)

*****ALL ITEMS ARE REQUIRED AND ALL RESPONSES MUST BE FILLED UNLESS NOT APPLICABLE.*****

	Response
<p>1) Please provide Single-Line Diagram(s), Three-Line Diagram(s), and Protective Relay List & Trip Schedule for the generation and interconnection facilities:</p> <p>General SLD Comments and Questions</p>	
<p>a. The Single-line diagram(s) and Three-line diagram (s) should include:</p>	
<p>i. For main and generator step up transformer(s), please show:</p> <ul style="list-style-type: none"> • Transformer voltage and MVA ratings. 	
<ul style="list-style-type: none"> • Transformer impedance(s). 	
<ul style="list-style-type: none"> • Transformer winding connections and grounding. If neutrals are grounded through impedance, please show the impedance value. 	
<p>ii. The protective relaying and metering for the generators, transformers, buses, and all other main substation equipment.</p>	
<p>iii. For the potential transformers, please indicate the type, quantity, ratio, and accuracy rating.</p>	
<p>iv. For the current transformers, please indicate the type, quantity, ratio, and accuracy rating, and thermal rating factor.</p>	
<p>v. Auxiliary power devices (e.g. capacitors, reactors, storage systems, etc.) and their rating(s); additional inquiries may be made to obtain technical data for these devices.</p>	
<p>vi. For the interconnection / tie lines (overhead or underground) and the plant's generation system, please provide the following, as applicable:</p> <ul style="list-style-type: none"> • Installation details such as cross-section(s), plan and profiles, etc. 	
<ul style="list-style-type: none"> • Conductor data such as size, insulation, length etc. 	
<ul style="list-style-type: none"> • Continuous and emergency current ratings. 	
<ul style="list-style-type: none"> • Voltage rating (nominal and maximum KV). 	
<ul style="list-style-type: none"> • BIL rating. 	
<ul style="list-style-type: none"> • Positive, negative, and zero-sequence impedances (resistance, reactance, and susceptance) 	
<ul style="list-style-type: none"> • Capacitance or charging current. 	
<ul style="list-style-type: none"> • Short-circuit current capability. 	
<p>vii. Include station power for facility and all applicable details.</p>	
<p>viii. All applicable notes pertaining to the design and operation of the facility.</p>	
<p>b. The Protective relay list & trip schedule should list the protected equipment; the relay description, type, style number, quantity, ANSI Device No., and range; and the breaker(s)/switching device(s) tripped, for both the generator protection and the interconnection facilities protection.</p>	
<p>c. Please provide both a paper and an electronic version (e.g. dgn, dxf, or pdf) of the single-line diagram(s) and the protective relay list & trip schedule.</p>	
<p>d. Single-line diagrams should be provided for both the generation plant and the interconnection substation.</p>	

FOR PV GENERATION

PROJECT:

DATE:

Preliminary

Interconnection Requirement Study - Data Request

(Nonexclusive Preliminary List)

*****ALL ITEMS ARE REQUIRED AND ALL RESPONSES MUST BE FILLED UNLESS NOT APPLICABLE.*****

	Response
2) Please provide a plan map of the Non Utility Generation (NUG) facilities; please indicate the interconnection point to the HECO system.	
3) For the power transformers including the generator step-up transformers, please provide: a. Transformer voltage and MVA ratings, and available taps. Attach copy of transformer test report or data sheet b. The tap settings used. c. The LTC Control Scheme. d. Transformer winding connections and grounding used. If the transformer is not solidly grounded, provide the impedance value for the grounding method. e. Positive, negative, and zero sequence impedance values.	
4) For the circuit breakers and fault-clearing switching devices, including the generator breakers, please provide: a. The voltage, continuous current and interrupting capability ratings. b. The trip speed (time to open).	
5) For the power fuses, please provide: a. The manufacturer, type, size, and interrupting capability. b. The minimum melt and total clearing curves.	
6) For the protective relaying, please provide: a. Data for the CTs used with the relaying including the manufacturer, type of CT, accuracy class, and thermal rating factor. b. Data for the PTs used with the relaying including the manufacturer, type of PT, voltage ratings, and quantity.	

FOR PV GENERATION

PROJECT:

DATE:

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Interconnection Requirement Study - Data Request

(Nonexclusive Preliminary List)

*****ALL ITEMS ARE REQUIRED AND ALL RESPONSES MUST BE FILLED UNLESS NOT APPLICABLE.*****

	Response
7) Please provide protective relay settings for existing and proposed generators, including but not limited to, reverse power, negative sequence, over and underfrequency, over and under voltage, volts per hertz, etc.	
8) Please provide the following data:	
PV - Inverter Based Generating Facility	
a. Inverter manufacturer, Type, Size, Impedances	
b. Power Factor Range Capability	
c. Auxillary loads (P, Q, Power Factor)	
d. Ramp rates (up, down) Typical and Measured Proxy Data	
e. Inverter's Internal Isolation Transformer Grounding Method, if used (i.e. effectively grounded, resonant grounded, low inductance grounded, high-resistance grounded, low-resistance grounded, ungrounded). If the transformer is not solidly grounded , provide the impedance value for the grounding neutral and the impedance for the isolation transformer.	
f. Diagram for Inverter's internal isolation transformer	
g. Switching and service restoration practice	
h. Protection data (voltage ride through and cut-off, frequency ride through and cut-off settings etc.). Include setpoint and clearing time ranges for voltage and frequency settings.	
i. Details of filters etc. at Point of Interconnection	
j. Description of harmonic spectrum of inverter injection (order, magnitude)	
k. Description of PV inverter with respect to varying levels of solar irradiance	
l. Validated PSS/E and Synergi load flow and dynamic models up to the point of interconnection (POI), if required. Documentation on the models should also be provided.	
m. Validated PSCAD model that accurately represents the inverter dynamic models. Documentation on the model shall also be provided.	
n. Validated Aspen Oneliner short circuit model that accurately represents the facility, and is valid for all faults conditions anywhere on the Utility system. Documentation on the model should also be provided. (OTHERWISE SEE ADDITIONAL TABS FOR REQUIRED INFORMATION TO MODEL INVERTER)	
9) Energy Storage System, if applicable	
a. Operation characteristics	
b. Voltage level	
c. Capacity (how long and how much can the battery support)	
d. Deployment strategy/schedule including the rate of charging and discharging and plan	
e. Validated PSS/E and Synergi load flow and dynamic models as requested in Section 8.l. shall include the energy storage equipment. Documentation on the model should also be provided.	
f. Energy storage system data sheet	
g. Validated Aspen Oneliner short circuit model requested in Section 8.m. shall include the energy storage equipment. Documentation on the model should also be provided.	
10) Please provide the following generation and load information for the NUG facilities:	
a. Expected KW and KVAR loads including, but not limited to, generators' auxiliary load curve, process load(s) profile(s), etc.	
b. Expected minimum and maximum MW and MVAR "import from" AND "export to" HECO.	
c. Gross and net output of the facility	

FOR PV GENERATION

PROJECT:

DATE:

Preliminary

Interconnection Requirement Study - Data Request

(Nonexclusive Preliminary List)

*****ALL ITEMS ARE REQUIRED AND ALL RESPONSES MUST BE FILLED UNLESS NOT APPLICABLE.*****

	Response
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FOR PV GENERATION

PROJECT:

DATE:

Preliminary

Interconnection Requirement Study - Data Request

(Nonexclusive Preliminary List)

*****ALL ITEMS ARE REQUIRED AND ALL RESPONSES MUST BE FILLED UNLESS NOT APPLICABLE.*****

		Response
11)	In addition to the items mentioned above, please provide the following for PSS/E models:	
	a. Object files and IPLANS for user written models, and applicable library files. The uncompiled source code for object files shall be provided to ensure compatability with future versions of PSS/E. In lieu of the uncompiled object file source code, compiled object file updates compatible with future PSS/E versions shall be provided as requested for the life of the project.	
12)	In addition to PSS/E, other power system analysis tools are required to study events that cannot accurately be modeled in PSS/E due to limitations of the program (e.g. sub-cycle behavior). Data compatible with the following tools shall be provided:	
	a. Time domain tools - PSCAD® or electro-magnetic transient program (EMTP). Documentation on the model shall also be provided.	
	b. ASPEN One-Liner (VALIDATED MODEL PREFERABLE; OTHERWISE SEE ADDITIONAL TABS FOR REQUIRED INFORMATION)	

NOTE: **Equivalent models other than PSSE may be required if the PSSE model cannot be converted properly.

Instructions:

Please fill in the data in the green blanks below

(Note: This does not include the internal isolation transformer, if used)

[1] Maximum rated output power = kVA

[2] Impedances in **Per Unit** based on kVA from [1]

	R	X
Subtransient =	<input type="text"/>	<input type="text"/>
Transient =	<input type="text"/>	<input type="text"/>
Synchronous =	<input type="text"/>	<input type="text"/>
Negative Sequence =	<input type="text"/>	<input type="text"/>
Zero Sequence =	<input type="text"/>	<input type="text"/>

[3] Neutral impedance (if any) in actual **Ohms**:

R	X
<input type="text"/>	<input type="text"/>

NOTE: These parameters should reflect the inverter response for all types of faults at any point on the electrical system to which the inverter is connected. This includes faults at the inverter output terminals, and also on the 138 kV transmission system. If the stated parameters do not cover this range, please state the adjustments needed to these parameters to accurately represent the inverter response across this range.

These parameters will be used to model the inverter in the Aspen Oneliner program as shown in the sample dialog box below:

Generating Unit Info

ID= Unit rating= MVA

Impedances (pu based on unit MVA)

Subtransient	<input type="text" value="0.1"/>	+j	<input type="text" value="0.1"/>	<input type="button" value="Fill"/>
Transient	<input type="text" value="0.1"/>	+j	<input type="text" value="0.1"/>	
Synchronous	<input type="text" value="0.1"/>	+j	<input type="text" value="0.1"/>	
- sequence	<input type="text" value="0.15"/>	+j	<input type="text" value="0.15"/>	
o sequence	<input type="text" value="9999.0"/>	+j	<input type="text" value="9999.0"/>	

Neutral Impedance (in actual Ohms)

+j

Scheduled generation. Enter MVAR for PQ buses only

MW= MVAR=

P and Q limits (MW and MVAR)

Pmax= Qmax=

Pmin= Qmin=

Updated 6/15/11

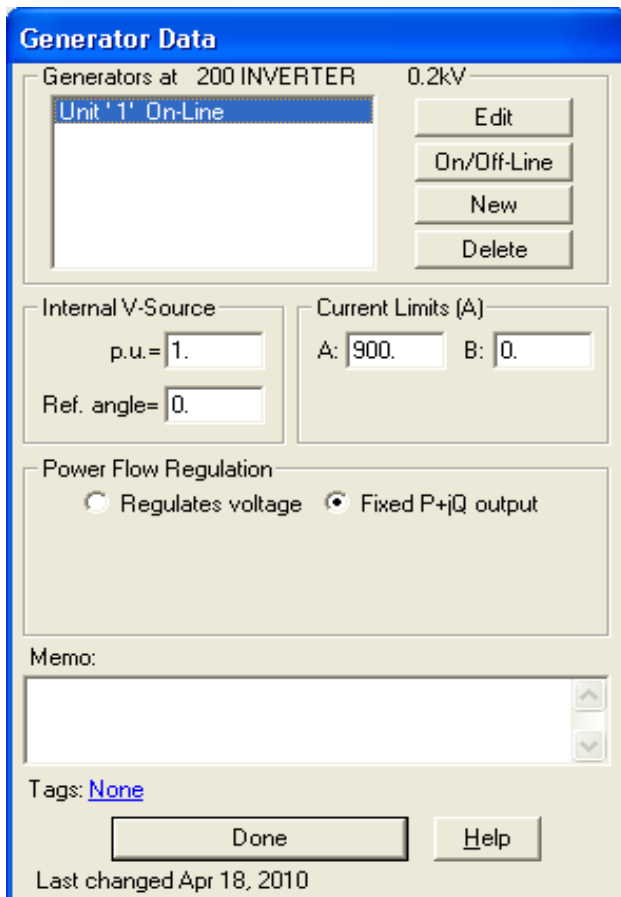
Instructions:

Please fill in the data in the green blanks below

- [1] Internal open circuit voltage
Magnitude = Per Unit
Angle = Degrees
- [2] AC Output Current Limit = Amps

NOTE: These parameters should reflect the inverter response for all types of faults at any point on the electrical system to which the inverter is connected. This includes faults at the inverter output terminals, and also on the 138 kV transmission system. If the stated parameters do not cover this range, please state the adjustments needed to these parameters to accurately represent the inverter response across this range.

These parameters will be used to model the inverter in the Aspen Oneliner program as shown in the sample dialog box below:



Updated 6/15/11

Instructions:

Please fill in the data in the green blanks below

(Note: This is not required if an internal isolation transformer is not used)

[1] Transformer rated power = kVA

[2] Winding Configuration

Inverter Side = Delta/Wye
 Customer Side = Delta/Wye

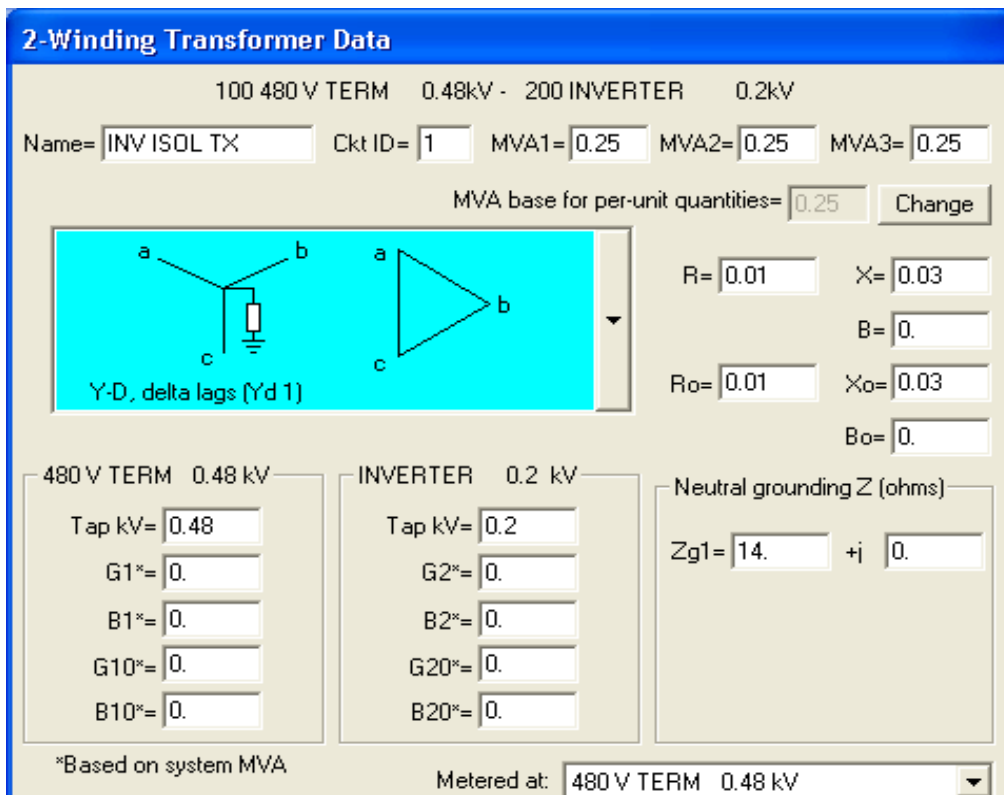
[2] Impedances in **Per Unit** based on kVA

Positive Sequence = R X
 Zero Sequence =

[3] Neutral impedance (if any) in actual **Ohms**:

R X

These parameters will be used to model the inverter in the Aspen Oneliner program as shown in the sample dialog box below:



Updated 6/15/11

Memo:

Tags: [None](#)

Last changed Apr 18, 2010

FOR WIND GENERATION

PROJECT:

DATE:

Preliminary

Interconnection Requirement Study - Data Request

(Nonexclusive Preliminary List)

*****ALL ITEMS ARE REQUIRED AND ALL RESPONSES MUST BE FILLED UNLESS NOT APPLICABLE.*****

		Response
1)	<p>Please provide Single-Line Diagram(s), Three-Line Diagram(s), and Protective Relay List & Trip Schedule for the generation and interconnection facilities:</p> <p>General SLD Comments and Questions</p>	
	<p>a. The Single-line diagram(s) and Three-line diagram (s) should include:</p>	
	<p>i. For main and generator step up transformer(s), please show:</p> <ul style="list-style-type: none"> • Transformer voltage and MVA ratings. 	
	<ul style="list-style-type: none"> • Transformer impedance(s). 	
	<ul style="list-style-type: none"> • Transformer winding connections and grounding. If neutrals are grounded through impedance, please show the impedance value. 	
	<p>ii. The protective relaying and metering for the generators, transformers, buses, and all other main substation equipment.</p>	
	<p>iii. For the potential transformers, please indicate the type, quantity, ratio, and accuracy rating.</p>	
	<p>iv. For the current transformers, please indicate the type, quantity, ratio, and accuracy rating, and thermal rating factor.</p>	
	<p>v. Auxiliary power devices (e.g. capacitors, reactors, storage systems, etc.) and their rating(s); additional inquiries may be made to obtain technical data for these devices.</p>	
	<p>vi. For the interconnection / tie lines (overhead or underground) and the plant's generation, please provide the following, as applicable:</p> <ul style="list-style-type: none"> • Installation details such as cross-section(s), plan and profiles, etc. 	
	<ul style="list-style-type: none"> • Conductor data such as size, insulation, etc. 	
	<ul style="list-style-type: none"> • Continuous and emergency current ratings. 	
	<ul style="list-style-type: none"> • Voltage rating (nominal and maximum KV). 	
	<ul style="list-style-type: none"> • BIL rating. 	
	<ul style="list-style-type: none"> • Positive, negative, and zero-sequence impedances (resistance, reactance, and susceptance) 	
	<ul style="list-style-type: none"> • Capacitance or charging current. 	
	<ul style="list-style-type: none"> • Short-circuit current capability. 	
	<p>vii. Include station power for facility and all applicable details.</p>	
	<p>vii. All applicable notes pertaining to the design and operation of the facility.</p>	
	<p>b. The Protective relay list & trip schedule should list the protected equipment; the relay description, type, style number, quantity, ANSI Device No., and range; and the breaker(s)/switching device(s) tripped, for both the generator protection and the interconnection facilities protection.</p>	

FOR WIND GENERATION

PROJECT:

DATE:

Preliminary

Interconnection Requirement Study - Data Request

(Nonexclusive Preliminary List)

*****ALL ITEMS ARE REQUIRED AND ALL RESPONSES MUST BE FILLED UNLESS NOT APPLICABLE.*****

	Response
c. Please provide both a paper and an electronic version (e.g. dgn, dxf, or pdf) of the single-line diagram(s) and the protective relay list & trip schedule.	
d. Single-line diagrams should be provided for both the generation plant and the interconnection substation.	

2)	Please provide a plan map of the Non Utility Generation (NUG) facilities; please indicate the interconnection point to the HECO system.	
----	--	--

3)	For the power transformers including the generator step-up transformers, please provide:	
	a. Transformer voltage and MVA ratings, impedances, and available taps. Attach copy of transformer test report or data sheet	
	b. The tap settings used.	
	c. The LTC Control Scheme.	
	d. Transformer winding connections and grounding used. If the transformer is not solidly grounded, provide the impedance value for the grounding method.	
	e. Positive, negative, and zero sequence impedance values.	

4)	For the circuit breakers and fault-clearing switching devices, including the generator breakers, please provide:	
	a. The voltage, continuous current and interrupting capability ratings.	
	b. The trip speed (time to open).	

FOR WIND GENERATION

PROJECT:

DATE:

Preliminary

Interconnection Requirement Study - Data Request

(Nonexclusive Preliminary List)

*****ALL ITEMS ARE REQUIRED AND ALL RESPONSES MUST BE FILLED UNLESS NOT APPLICABLE.*****

		Response
5)	For the power fuses, please provide:	
	a. The manufacturer, type, size, and interrupting capability.	
	b. The minimum melt and total clearing curves.	
6)	For the protective relaying, please provide:	
	a. Data for the CTs used with the relaying including the manufacturer, type of CT, accuracy class, and thermal rating factor.	
	b. Data for the PTs used with the relaying including the manufacturer, type of PT, voltage ratings, and quantity.	
7)	Please provide protective relay settings for existing and proposed generators, including but not limited to, reverse power, negative sequence, over and underfrequency, over and under voltage, volts per hertz, etc.	
8)	Please provide the data for the following:	
	Wind Turbines	
	a. Turbine Type and number	
	b. Ramp rates (up, down) Typical and Measured Data	
	c. Grounding Method (i.e. effectively grounded, resonant grounded, low inductance grounded, high-resistance grounded, low-resistance grounded, ungrounded). If the transformer is not solidly grounded or ungrounded, provide the impedance value for the grounding neutral, if applicable.	
	d. Provide grounding diagram.	
e. Switching and service restoration practice		

FOR WIND GENERATION

PROJECT:

DATE:

Preliminary

Interconnection Requirement Study - Data Request

(Nonexclusive Preliminary List)

*****ALL ITEMS ARE REQUIRED AND ALL RESPONSES MUST BE FILLED UNLESS NOT APPLICABLE.*****

	Response
f. Protection data (voltage ride through and cut-off, frequency ride through and cut-off settings etc.)	
g. Details of filters etc. at Point of Interconnection	
h. Description of harmonic spectrum of inverter injection if any (order, magnitude)	
i. Validated PSS/E load flow and dynamic model. Documentation on the models should also be provided.	
j. Validated PSCAD model that accurately represents the turbine governor/control dynamic model. Documentation on the model should also be provided.	
k. Turbine data sheet	
l. Validated Aspen Oneliner short circuit model that accurately represents the facility, and is valid for all faults conditions anywhere on the Utility system. (VALIDATED MODEL IS PREFERABLE; OTHERWISE, SEE ADDITIONAL TABS FOR	

9) Energy Storage System, if applicable	
a. Operation characteristics	
b. Voltage level	
c. Capacity (how long and how much can the battery support)	
d. Deployment strategy/schedule	
e. Validated PSS/E load flow and dynamic model including a block diagram of the control logic. Documentation on the model should also be provided.	

FOR WIND GENERATION

PROJECT:

DATE:

Preliminary

Interconnection Requirement Study - Data Request

(Nonexclusive Preliminary List)

*****ALL ITEMS ARE REQUIRED AND ALL RESPONSES MUST BE FILLED UNLESS NOT APPLICABLE.*****

		Response
	f. Energy storage system data sheet	
	g. Validated Aspen Oneliner short circuit model that accurately represents the facility, and is valid for all faults conditions anywhere on the Utility system.	
10)	Please provide the following generation and load information for the NUG facilities:	
	a. Expected KW and KVAR loads including, but not limited to, generators' auxiliary load curve, process load(s) profile(s), etc.	
	b. Expected minimum and maximum MW and MVAR "import from" AND "export to" HECO.	
	c. Gross and net output of the facility	
11)	In addition to the items mentioned above, please provide the following for PSS/E models:	
	a. Object files and IPLANS for user written models, and applicable library files. The uncompiled source code for object files shall be provided to ensure compatability with future versions of PSS/E. In lieu of the uncompiled object file source code, compiled object file updates compatible with future PSS/E versions shall be provided as requested for the life of the project.	
12)	In addition to PSS/E, other power system analysis tools are required to study events that cannot accurately be modeled in PSS/E due to limitations of the program (e.g. sub-cycle behavior). Data compatible with the following tools shall be provided:	
	a. Time domain tools - PSCAD® or electro-magnetic transient program (EMTP). Documentation on the model shall also be provided.	
	b. ASPEN One-Liner (VALIDATED MODEL PREFERRABLE; OTHERWISE SEE ADDITIONAL TABS FOR REQUIRED INFORMATION.)	
13)	For the wind plant's collector system, please provide the following, as applicable:	
	a. Conductor data such as size, insulation, etc.	
	b. Continuous and emergency current ratings.	
	c. Voltage rating (nominal and maximum kV).	
	d. BIL rating.	
	e. Positive, negative, and zero-sequence impedances (resistance, reactance, and susceptance).	
	f. Capacitance or charging current.	
	g. Short-circuit current capability.	

FOR WIND GENERATION

PROJECT:

DATE:

Preliminary

Interconnection Requirement Study - Data Request

(Nonexclusive Preliminary List)

*****ALL ITEMS ARE REQUIRED AND ALL RESPONSES MUST BE FILLED UNLESS NOT APPLICABLE.*****

	Response
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NOTE: **Equivalent models other than PSSE may be required if the PSSE model cannot be converted properly.

Instructions:

Please fill in the data in the green blanks below

(Note: This does not include the internal isolation transformer, if used)

[1] Maximum rated output power = kVA

[2] Impedances in **Per Unit** based on kVA from [1]

	R	X
Subtransient =	<input type="text"/>	<input type="text"/>
Transient =	<input type="text"/>	<input type="text"/>
Synchronous =	<input type="text"/>	<input type="text"/>
Negative Sequence =	<input type="text"/>	<input type="text"/>
Zero Sequence =	<input type="text"/>	<input type="text"/>

[3] Neutral impedance (if any) in actual **Ohms**:

R	X
<input type="text"/>	<input type="text"/>

NOTE: These parameters should reflect the inverter response for all types of faults at any point on the electrical system to which the inverter is connected. This includes faults at the inverter output terminals, and also on the 138 kV transmission system. If the stated parameters do not cover this range, please state the adjustments needed to these parameters to accurately represent the inverter response across this range.

These parameters will be used to model the inverter in the Aspen Oneliner program as shown in the sample dialog box below:

Generating Unit Info

ID= Unit rating= MVA

Impedances (pu based on unit MVA)

Subtransient	<input type="text" value="0.1"/>	+j	<input type="text" value="0.1"/>	<input type="button" value="Fill"/>
Transient	<input type="text" value="0.1"/>	+j	<input type="text" value="0.1"/>	
Synchronous	<input type="text" value="0.1"/>	+j	<input type="text" value="0.1"/>	
- sequence	<input type="text" value="0.15"/>	+j	<input type="text" value="0.15"/>	
o sequence	<input type="text" value="9999.0"/>	+j	<input type="text" value="9999.0"/>	

Neutral Impedance (in actual Ohms)

+j

Scheduled generation. Enter MVAR for PQ buses only

MW= MVAR=

P and Q limits (MW and MVAR)

Pmax= Qmax=

Pmin= Qmin=

Updated 6/15/11

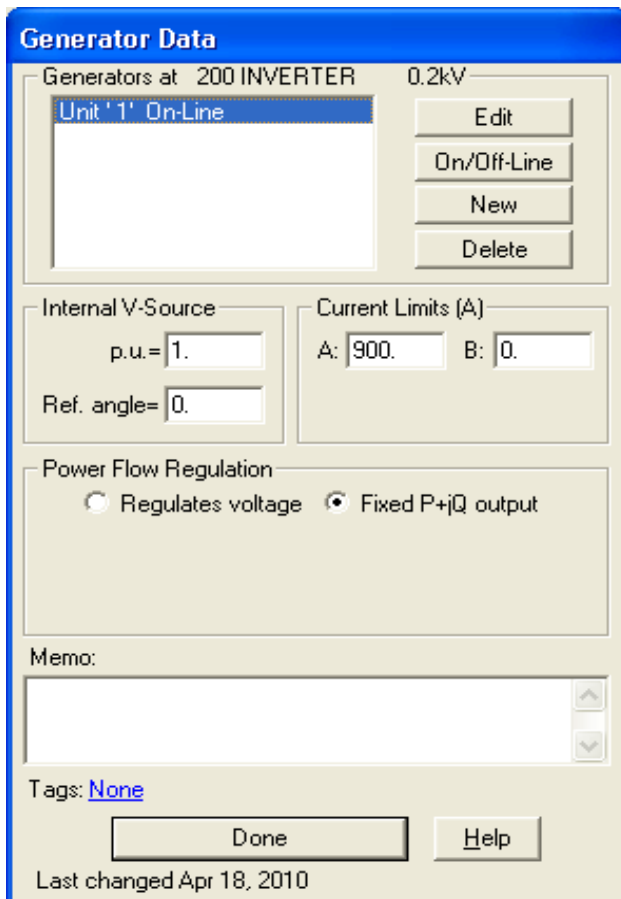
Instructions:

Please fill in the data in the green blanks below

- [1] Internal open circuit voltage
Magnitude = Per Unit
Angle = Degrees
- [2] AC Output Current Limit = Amps

NOTE: These parameters should reflect the inverter response for all types of faults at any point on the electrical system to which the inverter is connected. This includes faults at the inverter output terminals, and also on the 138 kV transmission system. If the stated parameters do not cover this range, please state the adjustments needed to these parameters to accurately represent the inverter response across this range.

These parameters will be used to model the inverter in the Aspen Oneliner program as shown in the sample dialog box below:



Updated 6/15/11

Instructions:

Please fill in the data in the green blanks below

(Note: This is not required if an internal isolation transformer is not used)

[1] Transformer rated power = kVA

[2] Winding Configuration

Inverter Side = Delta/Wye
 Customer Side = Delta/Wye

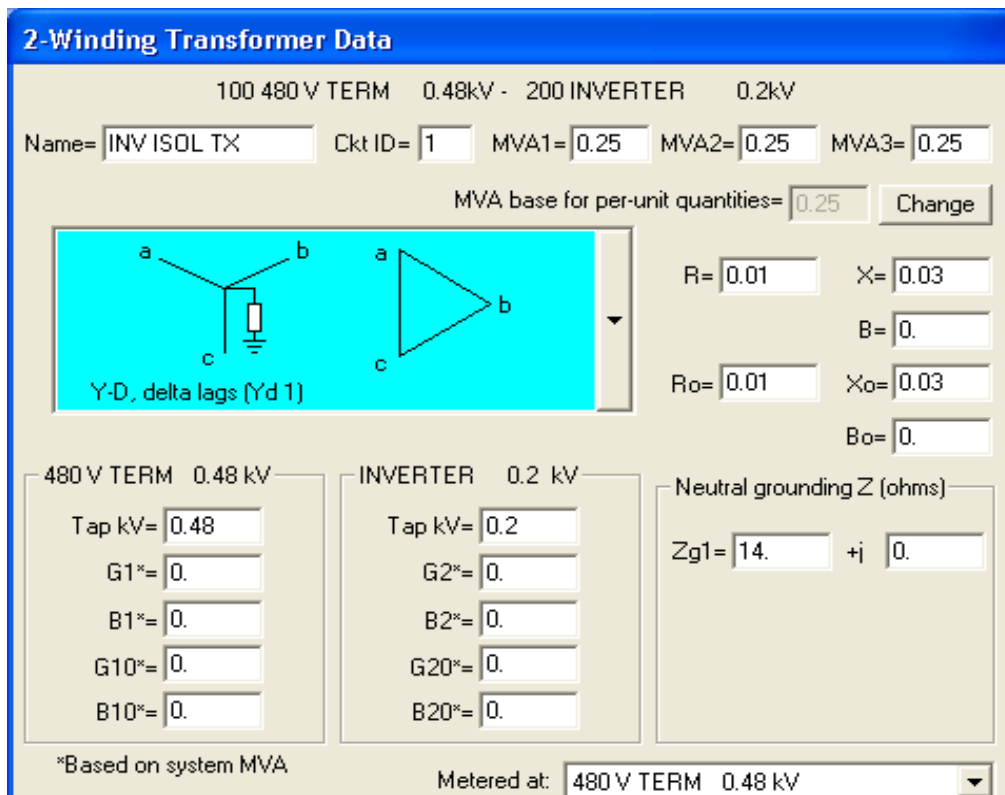
[2] Impedances in **Per Unit** based on kVA

Positive Sequence = R X
 Zero Sequence =

[3] Neutral impedance (if any) in actual **Ohms**:

R X

These parameters will be used to model the inverter in the Aspen Oneliner program as shown in the sample dialog box below:



Updated 6/15/11

Memo:

Tags: [None](#)

Last changed Apr 18, 2010

FOR SYNCHRONOUS, ASYNCHRONOUS, INDUCTION GENERATORS

PROJECT:

DATE:

Preliminary

Interconnection Requirement Study - Data Request

(Nonexclusive Preliminary List)

*****ALL ITEMS ARE REQUIRED AND ALL RESPONSES MUST BE FILLED UNLESS NOT APPLICABLE.*****

		Response
1)	<p>Please provide Single-Line Diagram(s), Three-Line Diagram(s), and Protective Relay List & Trip Schedule for the generation and interconnection facilities:</p> <p>General SLD Comments and Questions</p>	
	a. The Single-line diagram(s) and Three-line diagram (s) should include:	
	i. For main and generator step up transformer(s), please show: <ul style="list-style-type: none"> Transformer voltage and MVA ratings. Transformer impedance(s). Transformer winding connections and grounding. If neutrals are grounded through impedance, please show the impedance value. 	
	ii. The protective relaying and metering for the generators, transformers, buses, and all other main substation equipment.	
	iii. For the potential transformers, please indicate the type, quantity, ratio, and accuracy rating.	
	iv. For the current transformers, please indicate the type, quantity, ratio, and accuracy rating, and thermal rating factor.	
	v. Auxiliary power devices (e.g. capacitors, reactors, storage systems, etc.) and their rating(s); additional inquiries may be made to obtain technical data for these devices.	
	vi. For the interconnection / tie lines (overhead or underground) and the plant's generation system, please provide the following, as applicable:	
	<ul style="list-style-type: none"> Installation details such as cross-section(s), plan and profiles, etc. Conductor data such as size, insulation, etc. Continuous and emergency current ratings. Voltage rating (nominal and maximum KV). BIL rating. Positive, negative, and zero-sequence impedances (resistance, reactance, and susceptance) Capacitance or charging current. Short-circuit current capability. 	
	vii. Include station power for facility and all applicable details.	
	viii. All applicable notes pertaining to the design and operation of the facility.	
	b. The Protective relay list & trip schedule should list the protected equipment; the relay description, type, style number, quantity, ANSI Device No., and range; and the breaker(s)/switching device(s) tripped, for both the generator protection and the interconnection facilities protection.	

FOR SYNCHRONOUS, ASYNCHRONOUS, INDUCTION GENERATORS

PROJECT:

DATE:

Preliminary

Interconnection Requirement Study - Data Request

(Nonexclusive Preliminary List)

*****ALL ITEMS ARE REQUIRED AND ALL RESPONSES MUST BE FILLED UNLESS NOT APPLICABLE.*****

	Response
c. Please provide both a paper and an electronic version (e.g. dgn, dxf, or pdf) of the single-line diagram(s) and the protective relay list & trip schedule.	
d. Single-line diagrams should be provided for both the generation plant and the interconnection substation.	

2) Please provide a plan map of the Non Utility Generation (NUG) facilities; please indicate the interconnection point to the HECO system.	
---	--

3) For the power transformers including the generator step-up transformers, please provide:	
a. Transformer voltage and MVA ratings, and available taps. Attach copy of transformer test report or data sheet	
b. The tap settings used.	
c. The LTC Control Scheme.	
d. Transformer winding connections and grounding used. If the transformer is not solidly grounded, provide the impedance value for the grounding method.	
e. Positive, negative, and zero sequence impedance values.	

4) For the circuit breakers and fault-clearing switching devices, including the generator breakers, please provide:	
a. The voltage, continuous current and interrupting capability ratings.	
b. The trip speed (time to open).	

FOR SYNCHRONOUS, ASYNCHRONOUS, INDUCTION GENERATORS

PROJECT:

DATE:

Preliminary

Interconnection Requirement Study - Data Request

(Nonexclusive Preliminary List)

*****ALL ITEMS ARE REQUIRED AND ALL RESPONSES MUST BE FILLED UNLESS NOT APPLICABLE.*****

		Response
5)	For the power fuses, please provide:	
	a. The manufacturer, type, size, and interrupting capability.	
	b. The minimum melt and total clearing curves.	
6)	For the protective relaying, please provide:	
	a. Data for the CTs used with the relaying including the manufacturer, type of CT, accuracy class, and thermal rating factor.	
	b. Data for the PTs used with the relaying including the manufacturer, type of PT, voltage ratings, and quantity.	
7)	Please provide protective relay settings for existing and proposed generators, including but not limited to, reverse power, negative sequence, over and underfrequency, over and under voltage, volts per hertz, etc.	
8)	For the new generator(s), please provide:	
	a. Manufacturer and model of the generator.	
	b. Generator type (e.g. synchronous, induction, etc.). If synchronous, indicate round rotor or salient pole.	
	c. Generator voltage, MVA, and power-factor ratings.	
	d. Validated PSSE and Synergi load flow and dynamic model. Documentation on the models should also be provided.	
	e. Please provide the following: <ul style="list-style-type: none"> i. The time constants T'do, T'qo, T"do, T"qo. 	

FOR SYNCHRONOUS, ASYNCHRONOUS, INDUCTION GENERATORS

PROJECT:

DATE:

Preliminary

Interconnection Requirement Study - Data Request

(Nonexclusive Preliminary List)

*****ALL ITEMS ARE REQUIRED AND ALL RESPONSES MUST BE FILLED UNLESS NOT APPLICABLE.*****

	Response
ii. The reactance values for the Xd, Xq, X2, X0, X'd, X'q, X''d, X''q, and XL. Please provide both saturated (for short-circuit calculations) and unsaturated (for dynamics modeling) values where appropriate.	
iii. The inertia, H, for the generator/turbine/exciter combination.	
iv. The generator saturation characteristics.	
v. Starting power factor	
vi. Starting current	
vii. Starting torque	
viii. Full load speed/slip	
ix. Full load speed/slip	
x. Full load efficiency	
xi. Pull out torque	
f. Generator V/HZ curve.	
g. Negative Sequence Current Limit curve (I2t).	
h. Generator auxiliary load curve.	
i. Generator (MW/MVAR) capability curve(s).	
j. The type of grounding used with the generator. If the generator is not solidly grounded, provide the grounding method details and equipment ratings.	
k. Validated Aspen Oneliner short circuit model that accurately represents the facility, and is valid for all faults conditions anywhere on the Utility system.	

9) For the generators' excitation system, please provide:	
a. For synchronous generators, please provide the following.	
i. Exciter type, manufacturer, model, and voltage/current ratings.	
ii. Excitation system response ratio and ceiling factor.	
iii. Validated PSSE excitation system model with parameter values representative of the excitation system. Documentation of the model should also be provided.	
iv. Please indicate whether the excitation system has a maximum excitation (OEL) limiter, a minimum excitation (UEL) limiter, and/or a power system stabilizer (PSS); please provide the device settings if device(s) present.	
v. Description of the control mode of the excitation system, e.g. on voltage regulation, power factor regulation, etc.	
b. For asynchronous generators, please describe the method of excitation and its control. Note additional inquiries may be made to obtain technical data for such method.	

10) For generator's prime mover, please provide:	
a. Validated PSSE and Synergi governor system model with parameter values representative of the prime mover system. Documentation of the model should	
b. Description of the control mode of the prime mover, e.g. on droop control, load control, etc.	

FOR SYNCHRONOUS, ASYNCHRONOUS, INDUCTION GENERATORS

PROJECT:

DATE:

Preliminary

Interconnection Requirement Study - Data Request

(Nonexclusive Preliminary List)

*****ALL ITEMS ARE REQUIRED AND ALL RESPONSES MUST BE FILLED UNLESS NOT APPLICABLE.*****

		Response
11)	<p>Please provide the following generation and load information for the NUG facilities:</p> <p>a. Expected KW and KVAR loads including, but not limited to, generators' auxiliary load curve, process load(s) profile(s), etc.</p> <p>b. Expected minimum and maximum MW and MVAR "import from" AND "export to" HECO.</p> <p>c. Gross and net output of the facility</p>	
12)	<p>In addition to the items mentioned above, please provide the following for PSS/E models:</p> <p>a. Object files and IPLANS for user written models, and applicable library files. The uncompiled source code for object files shall be provided to ensure compatability with future versions of PSS/E. In lieu of the uncompiled object file source code, compiled object file updates compatible with future PSS/E versions shall be provided as requested for the life of the project.</p>	
13)	<p>In addition to PSS/E, other power system analysis tools are required to study events that cannot accurately be modeled in PSS/E due to limitations of the program (e.g. sub-cycle behavior). Data compatible with the following tools shall be provided:</p> <p>a. Time domain tools - PSCAD® or electro-magnetic transient program (EMTP). Documentation on the model shall also be provided.</p> <p>b. ASPEN One-Liner (VALIDATED MODEL TO BE PROVIDED)</p>	

NOTE: **Equivalent models other than PSSE may be required if the PSSE model cannot be converted properly.

DRAFT REQUEST FOR PROPOSALS
FOR
VARIABLE RENEWABLE DISPATCHABLE GENERATION
ISLAND OF OAHU

OCTOBER 23, 2017

Docket No. 2017-0352

*Appendix D – CODE OF CONDUCT
PROCEDURES MANUAL*



**Hawaiian
Electric**

DRAFT

**HAWAIIAN ELECTRIC COMPANY, INC.
MAUI ELECTRIC COMPANY, LIMITED
HAWAII ELECTRIC LIGHT COMPANY, INC.**

**Code of Conduct Procedures Manual
for the
Competitive Bidding
Program**

INTRODUCTION

The Framework for Competitive Bidding (“Framework”) adopted on December 8, 2006, by the Public Utilities Commission of the State of Hawaii (the “Commission”) pursuant to Decision and Order No. 23121 (Docket No. 03-0372, Instituting a Proceeding to Investigate Competitive Bidding for New Generating Capacity in Hawaii) requires that the utility develop and follow a Code of Conduct whenever a utility or its affiliate seeks to advance an energy generation resource proposal in response to a request for proposals (RFP) issued by the Company. Section III.A.4 of the Framework required the utility to submit to the Commission for review and approval (subject to modification if necessary) a Code of Conduct prior to the commencement of any competitive bid process under the Framework. On June 7, 2007, by letter to the Commission, the Company submitted its form of Code of Conduct for Commission review and approval. By Decision and Order No. 23614 (Docket No. 03-0372), issued August 28, 2007, the Commission approved the Code of Conduct.

This Code of Conduct Procedures Manual has been developed to outline the procedures to be followed and the policies that have been developed surrounding the implementation of Hawaiian Electric Company’s competitive bidding process for new generating capacity. This Code of Conduct Procedures Manual has been developed in accordance with the requirements of Section IV.H.9.a(iii) of the Framework and outlines requirements (1), (3) and (4) of such section, namely: (1) the protocols for communicating with proposers, the self-build team, and others; (3) the documentation forms, including logs for any communications with proposers; and (4) other information consistent with the requirements of the solicitation process. Requirement (2) of the section, the evaluation process in detail and the methodologies for undertaking the evaluation process for the RFP are described in detail in Chapter 4 (Evaluation Process and Evaluation Criteria) of the RFP. The bid evaluation process and methodology will consider both price/system impacts and non-price criteria in accordance with Section IV.E of the Framework and Tariff Rule 19 (See Appendix J (Tariff Rule 19) of the RFP).

The procedures and policies set forth herein have been designed to ensure that the procurement process is undertaken in a fair and equitable manner and that each Proposer is afforded an equal opportunity to participate and compete within the RFP framework.

This Code of Conduct Procedures Manual is intended as a guideline for implementing the Companies' solicitation process and to manage communications between Company personnel and consultants participating in the RFP process. Necessary additions, deletions, and/or changes depending on the circumstances surrounding the RFP and directions from the IO may be required.

DEFINITIONS

- **Affiliate-** An "affiliated interest" of the Company as defined in HRS Section 269-19.5(a), specifically: (1) any person/entity holding 10% or more of the shares of the Company, (2) any person/entity holding 10% or more of the ownership interests of an entity holding 10% or more of the shares of the Company; (3) any corporation, 10% of which is owned by a person/entity holding 10% or more the shares of the Company; (4) any person who is an officer or director of the Company; (5) any corporation operating the Company, or providing engineering, accounting, legal, or similar service to the Company, which has 3 or more officers or 3 or more directors in common with the Company; and (6) any corporation which has directors in common with the Company where the number of common directors is more than one-third of the total number of the Company's directors. For the purposes of any RFP where an Affiliate of the Company is presenting a proposal in response to the RFP, such Affiliate and its proposal will be considered and evaluated in the same manner as any other independent Proposer.
- **Affiliate Team –** Affiliate personnel and outside consultants for the Affiliate responsible for the development of the Affiliate's response to the RFP.

- Code of Conduct - A written code developed by Hawaiian Electric Company, Inc., Maui Electric Company, Limited and Hawaii Electric Light Company, Inc. (each, a "Company" and collectively, the "Companies") 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 follows the requirements described in Section IV.H.9.c of the Framework and was approved by the Commission in Decision & Order No. 23614.
- Company Executive in Charge – A Company's executive responsible for ensuring compliance with this Code of Conduct and serving as the point of contact for the Independent Observer for reporting any violations by the Company of the Code of Conduct. For any RFP of the Companies, the Company Executive in Charge shall be the Senior Vice President of Business Development & Strategic Planning. The Company's Corporate Compliance Officer shall remain responsible for the Companies' independent code of conduct and may support compliance matters and questions arising with employees, agents and other representatives of the Company, e.g., conflicts of interest, with respect to this Code of Conduct.
- Company RFP Team – The Company personnel and outside consultants responsible for the development of the Company's RFP and the evaluation of bids submitted in response to the RFP. Within the Company RFP Team, there may be designated certain "core" team members who will be permanent team members of any Company RFP Team. Such "core" members will not have any involvement with any Company Self-Build Team for the subject RFP.
- Company Self-Build Team - The Company personnel and outside consultants responsible for the development of the Company's self-build response to the RFP. Within the Company Self-Build Team, there shall be designated certain "core" team members who will be permanent team members of any Company Self-Build Team. Such "core" team members will not have any involvement with any Company RFP Team for the subject RFP.
- Confidential Information – Any non-public information developed and provided by the Company (i.e. proprietary system information, etc.) or Proposers during the RFP process (such non-public information may include, for example, the

identity of competing Proposers, and their technical, trade or financial information). This term includes any material non-public information regarding the RFP process developed for and used during the competitive bidding solicitation process, such as the evaluation process or criteria. Confidential Information does not include public information, such as information on resources in the Company's Power Supply Improvement Plan (PSIP) included in its filings with the Commission.

- Director of Energy Procurement - The director of the Division within the Renewable Acquisition Department responsible for directing the resources responsible for the implementation of the competitive bidding process pursuant to the Framework. The Director of Energy Procurement will report to the Manager of Renewable Acquisition on the status of the competitive bidding process.
- Eligible Proposer – A Proposer who has met the minimum requirements and threshold requirements in the RFP necessary to remain eligible to compete in the process.
- Energy Contract Manager – The staff position(s) within the Company's Renewable Acquisition Department responsible for managing the RFP.
- Framework – The Framework for Competitive Bidding contained in Decision & Order No. 23121 issued by Commission on December 8, 2006, to establish rules for competitive bidding in response to a request for proposals when a utility seeks to acquire new generation resources.
- Independent Observer (IO) – 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.
- Manager of Renewable Acquisition – The manager of the Department that will oversee the Company's competitive bidding process.
- Proposer – Entity who submits or plans to submit a proposal in response to a Company-issued RFP. An Affiliate of the Company participating in the RFP and submitting a proposal shall be considered a Proposer.

- RFP – A written request for proposals issued by one of the Companies to publicly solicit bids to supply future generating capacity to the Company pursuant to the competitive bidding process established in the Framework.
- Shared Resource – An employee of a Company or consultant to a Company who is authorized to provide information or input to both the Company RFP Team and the Company Self-Build Team and is not a resource dedicated to either team.
- Unassigned Company Resource -- Company employees unassigned to an essential team that may be called upon by the Company RFP Team and/or the Company Self Build Team to assist in meeting unforeseen tasks for the RFP or the Self-Build proposal. For example, the RFP team may be unable to evaluate an unforeseen technical specialty included in a bid. In that event, the RFP team would need to request assistance from an employee in the company or a consultant that isn't already assigned to an essential team and possesses the specific expertise. Such personnel are intended to assist the requesting team only in an ad hoc manner, limited in scope and purpose to the particular task required.

STATEMENT OF OBJECTIVES

From time to time, each of the Companies will be proposing to seek power supply proposals for electric generation resources that best meet the needs of the respective Company's system. The timing for issuance of RFPs for each of the systems will be dependent upon the Commission's approval of the associated PSIP and the necessary competitive bidding procedures identified in the Framework and upon the timing of the need for capacity for each island. Each of the Companies will undertake a detailed multi-stage review and evaluation process whereby eligible proposals will be selected based upon their ability to most cost-effectively and reliably satisfy the requesting Company's resource requirements. While cost minimization is a major criterion, the Companies will select those resources which, in its opinion, represent the best value to the Companies and its customers regarding economic and technical attributes, limited risk and flexibility for meeting its projected requirements. Consistent with this objective is the Companies' goal of ensuring the competitive benefits of the procurement process while continuing to provide equitable and fair consideration for all proposals. The

Companies also intend that the evaluation process will be well-documented so that the results of the evaluation can be fully reviewed by an IO to confirm that all proposals were treated in a fair and consistent manner.

The Code of Conduct and this Manual addresses (1) communication requirements and procedures associated with the relationship between utility employees (Company RFP Team, Company Self-Build Team, Shared Resources and Unassigned Company Resources); (2) communication requirements and procedures associated with the relationship between the Company RFP Team, the Company Self-Build Team and Proposers; and (3) communication requirements associated with the relationship between Company management and the Company RFP Team.

The Code of Conduct and this Manual also includes procedures for the sharing of resources, where appropriate, by the Company RFP Team and the Company Self-Build Team for the purposes of completing their efforts to effectively evaluate the RFP or to submit a bid in response to the RFP. The small size of the Companies and limitation of resources will require specialized services, information exchange and sharing of resources in certain limited circumstances. Company personnel and consultants identified as "Shared Resources" shall be designated by the Companies for this specific purpose.

ORGANIZATION AND COMMUNICATION RESPONSIBILITIES

This section outlines the RFP organizational structure for the development of the RFP and the Company self-build option and the organization's responsibilities to ensure that communications between Company personnel and consultants working on their respective RFP or self-build projects are conducted in a fair, consistent, and equitable basis so that the Company Self-Build Team does not enjoy any unfair advantage over other Proposers responding to the RFP.

A. Organization

The Company shall identify two separate teams to facilitate the independence and objectivity of the Company resources working on the RFP and ensure an arms-length relationship with the resources working on the Company's self-build project to avoid any real or perceived inequity in the RFP process. The two essential teams shall be the "Company RFP Team" and the "Company Self-Build Team."

Other limited Company resources, such as select staff from various functional areas of the Company that are in short supply and thus cannot be dedicated solely to either team, may be designated as "Shared Resources" to perform services for the Company RFP Team and Self-Build Team. Shared Resource employees are allowed to carry on with both their RFP (for either the RFP Team and/or the Self-Build Team) and regular functions throughout the resource planning process (including the development of any Company parallel or contingency plan as defined in the Framework), which may require communications with or services performed for the Self-Build Team. Shared Resource employees, however, will not participate in the evaluation and selection process of proposals submitted in response to the RFP. Rules for communications between Shared Resources and the essential teams shall be outlined below.

Company employees unassigned to the RFP may be called upon by the RFP Team, Self-Build Team, or both for help to meet unforeseen tasks. After completing the Code of Conduct training, these "Unassigned Company Resources" are eligible to assist on an ad hoc basis with the requirement that all communications as an Unassigned Company Resource must be memorialized logged in the same manner as communications with Shared Resources. If an Unassigned Company Resource is called upon repeatedly and asked for a substantial amount of assistance by a particular team, the employee should be assigned to such team or evaluated for designation as a shared resource.

Essential Teams

Company RFP Team. The Company RFP Team, tasked with preparing the RFP and evaluating the responses and bids in response to the RFP, will consist primarily of Director/Manager-level and other experienced employees together with possible outside consultants, with backgrounds in a number of disciplines necessary to conduct a thorough evaluation of each proposal. The members of the team will be prepared to evaluate proposals on the basis of their price and non-price aspects pertaining to their level of expertise. Members of the Company RFP Team will include professionals with experience in the following areas of expertise: engineering, siting/land use, environmental, transmission planning, fuel procurement, legal, financial planning, system operations, integrated resource planning, generation planning, production cost analysis, and others as needed.

Price and non-price sub-teams will conduct their sections of the bid evaluation process separately and will not share the results of their evaluation with members of the other sub-team. Each team will submit their evaluation results to an oversight team, which will be responsible for compiling the results of the evaluations and selecting the short-list.

The Energy Contract Manager will be responsible for directing the efforts of the Company RFP Team and for distributing the appropriate sections of the proposal to the appropriate Company RFP Team members when the proposals are received. The Energy Contract Manager will be responsible for maintaining the documentation underlying the evaluation of each proposal as well as all communications with proposers.

The Self-Build Team. The Self-Build Team, tasked with preparing any Company proposal to be submitted by the Company in response to a Company RFP, will consist primarily of Company employees, along with possible outside consultants

with backgrounds in a number of disciplines necessary to complete a competitive proposal in response to the Company RFP. The members of the team will include professionals with experience in the following areas of expertise: engineering, siting/land use, environmental, transmission planning, fuel procurement, legal, financial planning, system operations, integrated resource planning, generation planning, production cost analysis, and others as needed.

Affiliate Team. Any Affiliate Team will be comprised solely of employees and consultants of the Affiliate and no Company employee or consultant shall serve as a member of an Affiliate Team, provided, however, that a consultant may perform services for an Affiliate and the Company so long as appropriate “walls” are established satisfactory to the Company, that ensures that employees of the consultant working for the Affiliate Team do not also perform work for the Company nor communicate with employees of the consultant performing work for the Company, and vice versa.

Communications Protocols

Hawaiian Electric has developed policies and procedures governing communication between the Company RFP Team, the Company Self-Build Team, Shared Resources, the Proposers the IO, and with the Commission regarding RFP design and bid evaluation. Bid information and evaluation data and information shall not be communicated between members of the Company RFP Team, outside parties and other employees within the Companies except to those with a business need to know.

To ensure that the competitive bidding process is fair and unbiased, that all Proposers have access to the same information so that no Proposer has an unfair advantage, and that any Company self-build and/or Affiliate proposals do not have any unfair competitive advantage over third-party bids, the Companies shall follow the Code of Conduct whenever the utility or its Affiliate is seeking to advance a resource proposal as provided in Section IV.H.9.b of the Framework.

Each employee or consultant on the Company RFP Team, Company Self-Build Team and Shared Resources shall read, acknowledge and sign a Competitive Bidding Code of Conduct Acknowledgement of Receipt. Unassigned Company Resources who may be called upon by the Company RFP Team or Self-Build Team for help to meet unforeseen tasks shall also read, acknowledge and sign a Competitive Bidding Code of Conduct Acknowledgement of Receipt if called upon. Finally, each employee or consultant of an Affiliate intending to submit a proposal in response to a Company-issued RFP shall read, acknowledge and sign a Competitive Bidding Code of Conduct Acknowledgement of Receipt.

The Company issuing the RFP will establish a shared drive on its corporate computer network designed to maintain the bid evaluation documentation and other information associated with the bidding process. Only Company RFP Team members will have access to all the files on the shared drive.

In cases where staffing and resources are limited or constrained, Hawaiian Electric may identify Shared Resources or those employees eligible to provide information or serve as a resource to both the Company RFP Team and the Company Self-Build Team. Specific rules to log communications with the Company RFP Team or the Company Self-Build Team are described below.

Shared Resources will not have access to the Company's shared drive established for the RFP process which will include the documentation of the bid evaluation results.

A. Communications Between the Company RFP Team and Proposers, including the Company Self-Build Team.

During the RFP process, the Energy Contract Manager shall serve as the primary contact person for all RFP communications with Proposers. This is important from the standpoint of maintaining consistency and confidentiality of information between Proposers and the Company. For documentation and oversight purposes, all communications from

Proposers must be submitted to an established website link provided by the Company (the "Company RFP website"). The IO will monitor all communications through the Company RFP website. To ensure fair and equal access to information, any Company Self-Build Team and/or Affiliate Team shall be considered a Proposer for communication purposes and any request for information from the Company Self-Build Team or Affiliate Team to the Company RFP Team shall be through the Company RFP website.

A single exception to the communication process outlined above shall be instituted for the purpose of facilitating the preliminary exchange of confidential interconnection requirements for any Proposer's bid. For this limited scope, the Director of Interconnection Services will serve as the primary contact person for all such interconnection communications with a Proposer, provided that all necessary confidentiality and non-disclosure agreements are in place. Interconnection communications will be limited to a Proposer's bid and no more information other than as necessary to facilitate such communications will be permitted. Locations of projects shall be limited to that necessary only to determine the interconnection requirements of such project. The IO shall have the right to monitor all such communications in his/her discretion. Company, with input from the IO, reserves the right to share any information that may be generally applicable to all Proposers via the Company RFP website.

Subject to confidentiality obligations, it is the objective of the Code of Conduct that all Proposers, including the Company Self-Build Team, receive access to information released by the Company RFP Team, whether in response to a question from a Proposer or not, at the same time.

The communications process for addressing questions and requests for information from Proposers, and for the Company RFP Team to provide information to Proposers, is provided below:

1. Other than during Company sponsored conferences, Proposers must submit all questions to the Company RFP website or the designated RFP email address (if the Company RFP website has not been opened yet for the RFP).
2. Questions will be reviewed and responses will be coordinated with the appropriate functional area within the Company for a response. Every reasonable effort will be made to provide responses in a timely manner.
3. All responses, including the classification of such response, i.e., whether non-confidential or confidential as described below, will be made available to the IO for monitoring purposes. The IO may choose to comment on any response at its discretion.
4. Depending on the questions received, responses may involve Confidential Information of the Company and/or Proposers. Release of any Company Confidential Information must be approved in advance by the Company Executive authorized to release the Confidential Information. Any release of Company Confidential Information shall be accompanied by appropriate confidentiality and non-disclosure agreements, protective orders or other means required to maintain the confidentiality of the Company Confidential Information while still permitting its disclosure under circumstances deemed appropriate by the responsible Company Executive. Other non-Company Confidential Information will not be shared without the prior written consent of the owner of such Confidential Information and the execution of

appropriate confidentiality and non-disclosure agreements by all recipients of such Confidential Information. Responses will be categorized as follows:

Non-Confidential Responses: Questions and responses will either be posted directly on the Company RFP website (process-related questions or simple non-substantive information) or a description of the information that can be made available will be posted and Proposers will be instructed to submit a request to the Company via the Company RFP website to receive a copy.

Confidential Responses: Questions and a description or notice of a Confidential Information response will be posted on the Company RFP website and Proposers will be instructed to submit a request to the Company via the Company RFP website to receive instructions on how to access the Confidential Information. The Confidential Information will only be provided to the requestor after receipt of an executed Confidentiality and Non-Disclosure Agreement. Only those who have qualified to submit a bid (i.e. Eligible Proposers) and have executed a Confidentiality and Non-Disclosure Agreement will be considered for receipt of Confidential Information.

Process for Distribution of Confidential Information

Confidential Information provided in response to questions from proposers may be made available only to parties as indicated above via the following:

Confidential Information that is approved for exchanging on a secured access site: (1) Confidential Information may be made available on a secured website with an individual password provided to each approved Proposer. (2) Confidential Information

in documents may be transmitted to approved recipients through the Company's secure email system.

Confidential Information that can be made available for inspection only, but cannot be copied: There may be some types of Confidential Information that the Company may consider making available for inspection only with no copies allowed. This type of Confidential Information will be made available on Company premises for inspection only. Proposers will be advised via the Company RFP website to make arrangements with Company staff to view the Confidential Information.

Confidential Information that may not be released. In the event that Proposers submit questions that require responses that the Company feels are not appropriate to provide for reasons which may include, but not be limited to, safety, security, protection of trade secrets or intellectual property rights, Proposers will be advised as such via the Company RFP website.

6. Prior to and during the RFP, and outside of the Company RFP website protocol, developers may inquire with the Company Interconnection Services Department directly as to the interconnection viability of a proposed project. Contact information will be as follows:

Hawaiian Electric Company, Inc.
Interconnection Services Department
Attention: Director
Email: interconnection.services@hawaiianelectric.com
Telephone: _____

If determined necessary, face-to-face meetings may be scheduled.

7. Once bids are received, the Company may submit information requests to Proposers to clarify their proposals or request additional information. All contacts with Proposers will be through the Company RFP website. If determined necessary, face-to-face meetings may be scheduled. All contacts and information exchanged will be under the oversight of the IO.

B. Communications Between the Companies and the Commission.

The Company's Regulatory Affairs staff will be responsible for initiating communication with the Commission regarding the RFP or the Companies' evaluation process. Regular updates may be provided to the Commission regarding the RFP process if requested.

C. Communications between the Company RFP Team and the IO

Communications between the RFP Team and the IO will be required for many aspects of the evaluation process. The IO is also required to maintain confidentiality of any Company or Proposer Confidential Information. The IO will coordinate all activities through the Energy Contract Manager. The IO will be invited to participate in any meetings or discussions between the RFP Team and the Proposers and other communications as noted above. Sufficient notice will be provided whenever possible and teleconference and/or web conference alternatives may be utilized.

D. Communications between the Company RFP Team and the Company Self-Build Team

Any communication between the Company RFP Team and the Company Self-Build Team with respect to the RFP shall be handled no differently than with Proposers and other outside parties. Accordingly, the Self-Build Team will be required to submit any questions or information requests to the Company RFP Team via the Company RFP website and all responses will be provided in the same manner as to other Proposers. Members of

the Company RFP Team are prohibited from providing any input into the development of the self-build resource option by the Company or an affiliate. Company RFP Team members are prohibited from sharing any Confidential Information (i.e. detailed evaluation criteria, other proposals, etc.) with any Self-Build or Affiliate Teams except in accordance with the procedures in the Code of Conduct, this Manual or the RFP.

Company RFP Team members and Company Self-Build Team members may continue to work with each other on projects not related to the RFP. Further, members of each respective team do not have to be physically separated from each other but members of each team must make reasonable efforts to keep all Confidential Information (including electronic data) secure and inaccessible to the other team.

E. Communications among the Company RFP Team, the Company Self-Build Team and Shared Resources

Shared Resources may provide services to the Company RFP Team and the Company Self-Build Team. Shared Resources shall be limited as much as possible to instances where Company resources cannot provide a dedicated member to the Company RFP Team and the Company Self-Build Team at the same time and still provide the necessary functions of its area to the Company as a whole. Shared Resources are expressly prohibited from providing any information developed on behalf of the Company RFP Team to the Company Self-Build Team or any information developed on behalf of the Company Self-Build Team with the Company RFP Team, except through the formal communication process outlined above, i.e., through the Company RFP website.

Additionally, Shared Resources are required to maintain a written record of the time, date and substance of all conversations, data and written material directly or indirectly exchanged with the Company RFP Team, the Company Self-Build Team and any affiliates that pertain to the RFP.

A SharePoint-based interface will be set up and managed by the Energy Contract Manager to provide an easy to use and understand mechanism to log and memorialize these conversations.

Shared Resources will not have direct access to the Company's shared drive developed for the RFP process which will include documentation of the bid evaluation results.

F. Communications between the Company RFP Team, the Company Self-Build Team and any Unassigned Company Resource or consultant that is not a Shared Resource.

There may be times, in which a Company RFP or Self-Build team member may need ancillary or other ministerial or administrative assistance that requires communication and/or assistance from Company personnel who are not on any team nor considered a Shared Resource. In such events, such personnel may assist the requesting team member on an ad hoc basis upon the following conditions:

1. The essential team member making the request must inform the Company personnel that sharing of the requested information or assistance with the other team, be it the Company RFP or Company Self-Build Team, is expressly prohibited under the Code of Conduct.
2. The assisting Company personnel shall complete the Code of Conduct training and sign the Code of Conduct Acknowledgement form.
3. The assisting Company personnel shall be directed to the Company RFP and Company Self-Build Team rosters provided by such requesting team member to determine and/or confirm the restrictions on communication with the other team members. The essential team member making the request will ensure the roster of Unassigned

Company Resources is updated by the Energy Contract Manager to include the assisting Company personnel.

4. Unassigned Company Resources will be required to maintain a written record of the time, date and substance of all conversations, data and written material directly or indirectly exchanged with the Company RFP Team, the Company Self-Build Team and any affiliates that pertain to the RFP. A SharePoint-based interface will be set up and managed by the Energy Contract Manager to provide an easy to use and understand mechanism to log and memorialize these conversations.

5. If assistance from Unassigned Company Resource becomes more than occasional or more substantive than ancillary, ministerial or administrative services, the Unassigned Company Resource should be considered for inclusion on the team that he/she has been assisting on such basis. Additionally, the Unassigned Company Resource may also be considered for inclusion as a Shared Resource. Members of the Company RFP Team and/or Company Self-Build Team shall consult with the Company Executive for resolution.

G. Communications between Company RFP Team, Company Self-Build Team and Company Management.

The Company RFP Team and the Company Self-Build Team will necessarily require management approval of the RFP and the Self-Build Proposal. Because of the size of the Company, it may be possible that a single employee (at whatever level) (the "Approver") may have approval responsibility for matters affecting the RFP and the Self-Build proposal. Approvers in this situation must use their best judgment in making decisions reviewing and approving matters for the respective teams. The Code of Conduct must be adhered to in these situations and the Approver must not communicate matters learned from the Company RFP Team with the Company Self-Build Team.

If an Approver feels that he/she cannot manage this potential conflict, the Approver is recommended to consult with his/her immediate supervisor to determine whether such higher authority could be appointed with the task of reviewing and approving matters for a designated team, either the Company RFP Team or the Company Self-Build Team. In matters where a team of employees (including one or more Approvers) is responsible for reviewing and approving matters for the respective teams, approving employees (from whatever level, including executives) with information from reporting personnel beneath them from both the Company RFP Team and the Company Self-Build Team may consider recusing himself/herself from the decision making if such employee cannot objectively make a decision on the matter.

Finally, an Approver may be a member of either the Company RFP Team and have a subordinate reporting to him/her that is a member of the Company Self-Build Team (and vice versa). In such situations, because the Code of Conduct prohibits communication between the teams, the manager must recuse himself/herself from the decision making and request his/her manager to review and approve the matter in his/her place.

In all instances, it is possible that any particular situation above may be addressed and/or resolved by the terms and conditions of the Company's internal code of conduct implemented for all employees and consultants of the Company. As appropriate, an Approver or any other team member, Energy Contract Manager or Executive in Charge may involve the Company's Corporate Compliance Officer for input and possible resolution under the Company's internal code of conduct.

WHEN THE CODE OF CONDUCT BECOMES EFFECTIVE

1. No later than 30 days after the Commission opens the docket to issue an RFP the Code of Conduct for that RFP will be activated. However, if the Company Self-Build Team determines at any time that it will not pursue a Self-Build Option for a particular RFP, the Code of Conduct may be de-activated.
2. Upon the signal to activate Step 1 above, the Code of Conduct shall be activated and members of the Company RFP Team and the Company Self-Build Team must then conduct activities on the RFP or self-build process in compliance with the Code of Conduct. Once identified and having commenced work, no information may be shared outside the respective team members with respect to the RFP or the Self-Build Option except through the formal communication processes outlined above.
3. Immediately upon assignment to a Company team (RFP or Self-Build), designated as a Shared Resource, or requested to assist as an Unassigned Company Resource, each such employee or consultant must review this Manual, and sign the Code of Conduct acknowledgement form.
4. Within the RFP process, after a member has been assigned to a particular team, he or she will not be able to transfer to a different team at a later date for any reason. It is the responsibility of each team to fill vacant team positions with employees that have not been previously assigned as a team member for a team.
5. Each employee and consultant working on the RFP shall review the Code of Conduct and sign an acknowledgement attesting to his/her compliance with the Code of Conduct for each subsequent year until the Code of Conduct is terminated.

6. The Energy Contract Manager will be responsible for maintaining the Code of Conduct organizational chart and the signed "Acknowledgement of Code of Conduct" letters. The Company Executive in Charge shall be responsible for ensuring compliance with the Code of Conduct and shall have the written authority and obligation to enforce the Code of Conduct.

IMMEDIATE ACTIONS UPON ACTIVATION OF THE CODE OF CONDUCT

The following items are required to be completed as soon as possible after activation of the Code of Conduct but no later than the designated events specified for each item below.

1. No later than 30 days after the opening of the docket commencing an RFP, an organizational chart listing employee (with their title) and consultants in their designated role; Company RFP Team, Company Self-Build Team, Affiliate Team, Shared Resource or Unassigned Company Resource. When the IO is appointed, this organizational chart shall be provided to him/her. The organizational chart shall be placed in an accessible database (such as the Company's SharePoint database) so that any Company personnel can access the database to determine the identity of the respective teams and Shared Resources.

2. Upon the finalization of the organizational chart for the RFP and upon each addition to any team, the Energy Contract Manager shall obtain signed copies of the "Acknowledgement of Code of Conduct" by Affiliate Team members, and all employees (whether full-time, part-time, temporary, or contract) and consultants involved in the competitive bidding process, such as members of the Company RFP Team, the Company Self-Build Team, Shared Resources or Unassigned Company Resources.

3. No later than 30 days after the opening of the docket commencing an RFP, establishment of the Company email address to accept requests for

information from Proposers, including the Company Self-Build Team or any Affiliate Team.

4. No later than 30 days after the opening of the docket commencing an RFP, establishment of the Company secured site that houses the accessible database (such as SharePoint).

WHEN THE CODE OF CONDUCT TERMINATES

The Code of Conduct for a specific RFP will terminate after the following two conditions are met:

1. When the final contract(s) with the successful proposer(s) is executed or when written notice of the RFP's termination is provided by the Director of Energy Procurement or his/her designee to the IO and the Commission.
2. A certification of Code of Conduct compliance by all employees participating in the specific RFP process is submitted by affidavit by the Company Executive in Charge.

DOCUMENTATION FORMS

The following documentation forms may be utilized by those Company personnel involved in the RFP. These forms may be amended from time to time as necessary. Additional forms may also be developed as determined necessary.

- Code of Conduct Acknowledgement Form
- Code of Conduct Attestation Form (annual/final)
- Communications Log for Shared Resources
- Organizational Chart for essential teams and Shared Resources

DRAFT REQUEST FOR PROPOSALS
FOR
VARIABLE RENEWABLE DISPATCHABLE GENERATION

ISLAND OF O‘AHU

OCTOBER 23, 2017

Docket No. 2017-0352

Appendix E – PowerAdvocate User Information



**Hawaiian
Electric**

Electronic Procurement Platform

1. “Sourcing Intelligence,” developed by PowerAdvocate is the Electronic Procurement Platform that the Company has licensed and will utilize for this RFP. Proposers who do not already have an existing account with PowerAdvocate, and intend to submit a Proposal for this RFP, will need to register as a “Supplier” with PowerAdvocate.
2. There are no license fees / costs or usage fees to Proposers for an account or to use of the PowerAdvocate Platform.
3. Proposers may register for an account by clicking on the “Registration” button on the PowerAdvocate website at the following address:

www.poweradvocate.com

4. In order to complete the registration, the Proposer will need to review and accept PowerAdvocate’s Terms of Use. The Terms of Use are available online and a copy is also attached for convenience in Appendix E.
5. Once a Proposer has successfully registered as a Supplier with PowerAdvocate, the Proposer shall request access to the subject RFX¹ event from the Energy Contract Manager via email through the RFP Email Address. The email request must list the Supplier name under which the Proposer has registered with PowerAdvocate.

Once the RFX event is opened, Proposers will have online access to general notices, RFP-related documents, and other communications via theSourcing Intelligence, and may begin to submit their Proposal.

6. Proposals shall be accepted only through the PowerAdvocate Platform.

Instructions to Proposers – Electronic Procurement Platform

7. Prior to the opening of the RFX event in Sourcing Intelligence, Proposers are encouraged to familiarize themselves with Sourcing Intelligence.
8. Proposers should note that they will not be able to access any Bid documents until the event officially opens in Sourcing Intelligence.
9. An e-mail notification will be sent to all prospective Proposers via the Sourcing Intelligence when the event has been opened to receive Proposals.
10. Proposals must be submitted through Sourcing Intelligence before 2:00 p.m. HST on the date shown in the RFP Schedule. Sourcing Intelligence will not accept the submittal of late information for this RFX event. It is the Proposer’s sole responsibility to ensure that its complete information has been submitted on time. Any proposal information that is merely SAVED, but not SUBMITTED will not be considered.

¹ RFX event is the terminology used in Sourcing Intelligence to describe the RFP event.

11. All Bids must be prepared in accordance with the procedures and format specified in the RFP and the RFx event. Proposers are also required to respond to all questions and provide all information requested in the RFP and the RFx event, as applicable. This process is intended to provide an orderly, consistent and fair evaluation of the Proposals.
12. Items in the RFx event that are not applicable to a specific Proposer or contract type must be clearly marked as “N/A” (Not Applicable) and provide a brief explanation for each item as marked.
13. It is the Proposer’s sole responsibility to advise the Energy Contract Manager of conflicting requirements, ambiguities, omission of information, or the need for clarification prior to submitting a Proposal and before the due date for submission of Proposals.
14. It is the Proposer’s sole responsibility to ensure the timely submission of the completed Proposal. The Company will not be responsible for technical problems that interfere with the upload or download of Proposal information. PowerAdvocate provides live customer support Monday through Friday, from 8 AM to 8 PM, Eastern Standard Time (EST) and is closed on all Federal Holidays.
15. Proposers are encouraged to start early, SAVE data frequently and avoid waiting until the last minute to SUBMIT the required information. Proposers are allowed to revise information that has been previously submitted, as well as add, modify and/or delete documents anytime before the event closes. There is no limit to the size of a file that can be uploaded, but larger files will take longer. Multiple files can also be compressed into a .zip archive for upload.
16. Proposers may form a team to establish additional authorized persons who will have access to their team’s proposal. Proposers wishing to form a team, must declare a Team Name, and designate a Supplier to be the main contact. The main contact shall send an email to the Energy Contract Manager containing the team member’s/s’ name, email address and relationship, to request the addition of team member/s. All team members must have registered on PowerAdvocate and meet the requirements stated above to be granted access to the subject RFx event before they can be added to the team.
17. Be advised that multiple users from the same company or team cannot simultaneously fill out a datasheet. When one user saves, others’ work will be lost.
18. Proposals that are not included on the Short List will be released when the Short List is established. All other Proposals must remain valid through the selection of the Final Award Group, through the signing of the PPA and approval by the PUC..
19. All contract negotiations and contract award will be handled by the Company.

PowerAdvocate Platform Submittal Procedures

20. After logging onto the PowerAdvocate Platform, the RFP will be visible on your dashboard with several Tabulations (Tabs) each used for the following:
21. Within the RFX event, Suppliers will have access to several tabs, including Download Documents, Upload Documents, Commercial Data, Technical Data, Pricing Data, and Messaging.
 - “Download Documents”: Documents stored under this tab are provided for the Suppliers use and information. All documents can be downloaded and/or printed, as required. If available, the Company’s responses to Proposer questions will be posted in this tab.
 - “Upload Documents”: In addition to specific data that is requested through the datasheets stored under the Commercial, Technical and Pricing Data Tabs, files such as (spreadsheets, pdfs, word documents, signature statements, etc) may be requested. Such files being submitted by the Supplier may be uploaded here.
 - “Commercial Data”: Proposers are required to fill in the Commercial datasheets.
 - “Technical Data”: Proposers are required to fill in the Technical datasheets.
 - “Pricing Data”: Proposers are required to fill in the Pricing datasheets.
22. All responses to this RFP shall be submitted in the English language.
23. All questions or concerns regarding the RFP shall be submitted to the Energy Contract Manger via the PowerAdvocate Messaging tab.
24. Questions regarding the PowerAdvocate platform ONLY should be directed to:
25. PowerAdvocate Support

E-mail: support@poweradvocate.com

Tel: +001.857.453.5800

Note that any questions regarding the RFP submitted to PowerAdvocate will not be answered. PowerAdvocate may, but shall not be obligated to, forward any such questions to the Company and any Proposer submitting such questions to PowerAdvocate does so at its own risk.

9/22/2017

PowerAdvocate :: Terms of Use



PowerAdvocate Terms of Use (Version: January 19, 2010)

READ THESE TERMS OF USE CAREFULLY BEFORE USING THE SITE. BY USING OR ACCESSING THE SITE, YOU ACKNOWLEDGE THAT YOU HAVE READ, ACCEPT, AND AGREE TO BE BOUND BY THESE TERMS OF USE.

1. Background

Your use of www.poweradvocate.com (the "Site") is governed by these PowerAdvocate Terms of Use ("Terms of Use" or "Agreement"). The password-protected areas of the Site allows individuals or entities with registered Users (as defined below) to access and use the PowerAdvocate Energy Intelligence Platform. Your use of the Energy Intelligence Platform (or any of the individual products that comprise the Energy Intelligence Platform – Spend Intelligence, Cost Intelligence, Market Intelligence and Sourcing Intelligence as of the date hereof) is governed by these Terms of Use and by any license, subscription or other applicable written contract entered into by you or by the Participating Company (as defined below) for which you are a User. A "Participating Company" is an individual or a legal entity that has Users that have registered to participate on the Energy Intelligence Platform. The employees or authorized agents of a Participating Company are referred to as "Users." A Participating Company submitting information on, or bids or other offers to sell, goods or services (including any entity acting as a representative or agent for another) on Sourcing Intelligence is referred to as a "Supplier Company." A Participating Company posting a request on the Sourcing Intelligence, or otherwise requesting or collecting information on, or receiving bids or offers for the purchase of, goods or services from Supplier Companies is referred to as a "Buyer Company." Except as expressly stated otherwise, all terms apply equally to Supplier Companies and to Buyer Companies.

2. Registration

Each User must register on the Site before Users are authorized to participate on the Energy Intelligence Platform.

3. User Names and Passwords

Each User will be issued a unique user name and password upon registration. Each Participating Company agrees to take all reasonable precautions to maintain as confidential the user names and passwords of its Users. Each Participating Company agrees not to provide access to the Energy Intelligence Platform to any persons other than authorized Users through use of their user names or passwords and to notify PowerAdvocate upon becoming aware of any loss or theft of a user name or password or an unauthorized use of the Energy Intelligence Platform or a user name or password. A Participating Company will be responsible for all use of its user names and passwords by any person or entity. At its sole discretion and at any time, PowerAdvocate may disable one or more user names or passwords or otherwise deny a User access to the Energy Intelligence Platform.

4. PowerAdvocate's Role

PowerAdvocate may be involved on the Site in many ways, including by assisting a Buyer Company with the preparation and posting of a request for proposals on Sourcing Intelligence, by promoting Supplier Company participation, and by facilitating Participating Company use of the Energy Intelligence Platform through helpdesk services. PowerAdvocate will not take title to, or otherwise have any liability for, any products or services sold or offered for sale on the Site, and each Participating Company hereby releases PowerAdvocate from any such liability. PowerAdvocate is not responsible for any material posted on the Site by a Participating Company. PowerAdvocate has no obligation to monitor the content on the Site. PowerAdvocate has the right, but not the obligation, to remove any material posted on the Site, including any material that is alleged to violate an intellectual property right (whether or not the allegation proves accurate) or that may violate these Terms of Use or applicable laws.

5. Participating Company's Role

Each Participating Company is responsible for all activities carried out on the Energy Intelligence Platform by its Users, and ensuring that each of its Users abides by the Terms of Use, as they are amended from

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time to time and appear on the Site. All Users must be employees or authorized agents of a Participating Company and authorized by that Participating Company to conduct business on the Energy Intelligence Platform. A Participating Company shall inform PowerAdvocate immediately of any change in a User's status that affects that User's right to use the Energy Intelligence Platform. Should a Participating Company fail to do so, that Participating Company will continue to be responsible for all the User's activities on the Energy Intelligence Platform. The applicable Buyer Companies and Supplier Companies are responsible for determining the final terms and conditions between them with respect to a purchase and sale of goods or services arising out of their use of Sourcing Intelligence, including pricing, warranties, logistics, transportation, and inspection as required. If a Buyer Company elects to purchase any goods or services, that Buyer Company and the successful Supplier Company(s) will enter into any contracts they deem necessary and PowerAdvocate will not be a party thereto. You and each Participating Company warrant and covenant that its Contact Information (as defined in paragraph 9), its posting of any materials on the Site, and its other uses of and activities on the Site do not and shall not: (a) infringe any third party's copyright, patent, trademark, trade secret or other intellectual property rights, or other proprietary rights or rights of publicity or privacy; (b) violate any law, statute, ordinance or regulation (including, without limitation, those governing export control, unfair competition, deceptive trade practices, and false advertising); or (c) constitute activities that are scandalous, deceptive, inaccurate, misleading, defamatory, libelous, obscene, harassing or threatening. You and each Participating Company will comply with all applicable laws, statutes, ordinances and regulations regarding its use of the Site, and regarding its ordering of, bidding on or purchase of goods and services, and its posting and retrieval of information, on or through the Site. Access to the Site by means of screen scrapers, web crawlers or similar methods is prohibited. Any Supplier Company acting as a representative or agent for another Supplier Company (e.g., a manufacturer's representative) acknowledges and agrees that these Terms of Use are intended to bind itself and the Supplier Company that it represents. Each Participating Company represents and warrants that it has all necessary right, title and interest to enter into this Agreement and to perform its obligations under this Agreement and, in the case of a Supplier Company acting as a representative for another Supplier Company, that it has the power to bind that other Supplier Company to these Terms of Use.

6. Third Party Links

The Site may contain links to third-party web sites not under the control or operation of PowerAdvocate. PowerAdvocate does not endorse these third-party web sites, and is not responsible for the contents of any linked site or any link contained in a linked site. You may provide a hypertext link to the Site on another web site, so long as such link is done in good taste and does not create the false appearance that PowerAdvocate is associated with or sponsoring the linking web site. The use of techniques to frame the Site within a third-party web site is not permitted under this Agreement. PowerAdvocate reserves the right to revoke its consent to any link at any time in PowerAdvocate's sole discretion.

7. Warranties and Limitations of Liability

THE SITE IS PROVIDED ON AN "AS IS" AND "AS AVAILABLE" BASIS. POWERADVOCATE MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, WITH RESPECT TO: THE SITE; ANY GOODS, SERVICES OR INFORMATION OFFERED ON OR THROUGH THE SITE; ANY BID EVENTS THAT MAY BE CONDUCTED ON OR THROUGH SOURCING INTELLIGENCE, INCLUDING (i) THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, AND NON-INFRINGEMENT, (ii) THAT THE SITE OR THE INTERNET WILL MEET ANY PARTICULAR REQUIREMENTS, WILL BE AVAILABLE, ACCESSIBLE, UNINTERRUPTED, TIMELY, ACCURATE, SECURE OR OPERATE WITHOUT ERROR, AND (iii) ANY IMPLIED WARRANTY ARISING FROM COURSE OF DEALING OR USAGE OF TRADE. POWERADVOCATE MAKES NO REPRESENTATION OR WARRANTY AS TO THE CREDITWORTHINESS, TRUSTWORTHINESS AND ACCEPTABILITY OF ANY PARTICIPATING COMPANIES OR TO THE QUALITY, SUITABILITY, OR CONDITIONS OF GOODS AND SERVICES PROCURED FROM OR THROUGH ANY PARTICIPATING COMPANIES. ANY FORECASTS OR OTHER FORWARD-LOOKING PROJECTIONS OR TRENDS CONTAINED ON THE SITE ARE NOT GUARANTEES OF ACTUAL FUTURE CONDITIONS. ACTUAL FUTURE CONDITIONS MAY DIFFER MATERIALLY FROM WHAT IS FORECAST OR ESTIMATED ON THE SITE DUE TO A VARIETY OF FACTORS THAT COULD INCLUDE CHANGING SUPPLY AND DEMAND CONDITIONS, CHANGING GLOBAL OR NATIONAL ECONOMIC PERFORMANCE, LABOR ISSUES, SHIPPING AND TRANSPORTATION ISSUES, PRODUCTION MISTAKES, OR FORCE MAJEURE EVENTS. TO THE MAXIMUM EXTENT PERMISSIBLE UNDER APPLICABLE LAW, POWERADVOCATE AND ITS SUBSIDIARIES AND AFFILIATES, AND THEIR RESPECTIVE EMPLOYEES, DIRECTORS, AND AGENTS, WILL NOT BE LIABLE FOR ANY DAMAGES OF ANY KIND WHATSOEVER, INCLUDING, WITHOUT LIMITATION, ANY AND ALL DIRECT, INDIRECT, INCIDENTAL, SPECIAL, PUNITIVE AND CONSEQUENTIAL

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DAMAGES (INCLUDING WITHOUT LIMITATION FOR LOST PROFITS, REVENUES OR DATA), ARISING OUT OF OR IN CONNECTION WITH THE SITE, USAGE OF THE SITE, OR THOSE RESULTING FROM ANY GOODS OR SERVICES PURCHASED OR OBTAINED OR MESSAGES RECEIVED THROUGH, OR TRANSACTIONS ENTERED INTO AS A RESULT OF USING THE SITE. THE LIMITATIONS OF LIABILITY PROVIDED IN THESE TERMS OF USE INURE TO THE BENEFIT OF POWERADVOCATE, AND ITS SUBSIDIARIES AND AFFILIATES, AND THEIR RESPECTIVE OFFICERS, DIRECTORS, EMPLOYEES, ATTORNEYS AND AGENTS. IN THE EVENT THAT A PARTICIPATING COMPANY HAS A DISPUTE WITH ANOTHER PARTICIPATING COMPANY, BOTH SUCH PARTICIPATING COMPANIES HEREBY RELEASE POWERADVOCATE, AND ITS SUBSIDIARIES AND AFFILIATES, AND THEIR RESPECTIVE OFFICERS, DIRECTORS, EMPLOYEES, ATTORNEYS AND AGENTS, FROM ALL CLAIMS, LOSSES, LIABILITIES, DEMANDS, AND DAMAGES OF EVERY KIND AND NATURE (DIRECT, INDIRECT, SPECIAL, PUNITIVE, CONSEQUENTIAL OR OTHERWISE) ARISING OUT OF OR IN ANY WAY CONNECTED WITH SUCH DISPUTE.

8. Confidential Information

PowerAdvocate recognizes the importance of protecting confidential and proprietary information collected or posted on the Energy Intelligence Platform and of not disclosing such information to unauthorized third parties. As such, PowerAdvocate enters into confidentiality agreements with PowerAdvocate customers that contain PowerAdvocate's sole obligations concerning the treatment of confidential or proprietary information collected or posted by that customer on the Site.

9. Intellectual Property

"PowerAdvocate" (alone and together with the three rings) is a registered trademark of Power Advocate, Inc. In addition, "Energy Intelligence Platform," "Spend Intelligence", "Cost Intelligence", "Market Intelligence", and "Sourcing Intelligence" are trademarks or service marks of Power Advocate, Inc. Unless otherwise noted on the Site, all other trademarks, service marks, and logos used in this Site are the trademarks, service marks or logos of their respective owners. All ownership rights -- including all right, title, and interest in all patents, copyrights, trademarks, trade secrets and other intellectual property rights -- in the Site, including any software associated with the operation or functioning of the Site, are and will remain in PowerAdvocate or its licensors. You and each Participating Company will not undertake to copyright, trademark or patent the Site, or any portion thereof. You and each Participating Company acknowledge that all or portions of the Site (including the software and methodologies associated with the operation or functioning of the Energy Intelligence Platform) may be copyrighted, trademarked or patented by PowerAdvocate or another party. You and each Participating Company acknowledge that no such act will cause or be construed as causing any portion of the Energy Intelligence Platform to be in the public domain. You and each Participating Company will not, and will not attempt to, modify, reverse engineer, disassemble or decompile the Site, or permit or cause any third party to do so on your behalf. Any changes, advice, modifications or evaluations of or concerning the Site generated or proposed by any party will be the exclusive property of PowerAdvocate and will not give any one other than PowerAdvocate any right, title or interest in or to the Site. All ideas, concepts, know-how or techniques relating to the use, operation or functioning of the Site will be the exclusive property of PowerAdvocate or PowerAdvocate's licensors. You and each Participating Company are granted only a limited, revocable, non-transferable license to print and download portions of any materials created by PowerAdvocate ("PowerAdvocate Materials") and posted on the Site solely for internal, non-commercial use, provided that any copyright notice and any other notices that appear on any such copies are maintained and unmodified. Any other use, copying, redistribution, publication, or retransmission of any portion of any PowerAdvocate Materials on the Site is strictly prohibited without the express written permission of PowerAdvocate. All PowerAdvocate Materials on the Site are, and shall continue to be, owned by PowerAdvocate. Each Participating Company shall also maintain any copyright notice and any other notices that appear on any materials created by any third party and posted on the Site. PowerAdvocate retains all rights to any data, modules, components, designs, utilities, subsets, objects, program listings, tools, models, methodologies, programs, systems, analysis frameworks, leading practices ("Technical Elements") owned or developed by PowerAdvocate prior to, or independently from, the provision of the Site (and any modifications or enhancements to PowerAdvocate's Technical Elements developed in the course of providing the Site) (collectively, "PowerAdvocate Technical Elements") and PowerAdvocate retains exclusive ownership rights to all PowerAdvocate Technical Elements. PowerAdvocate retains all rights to its knowledge, experience and know-how (including processes, ideas, concepts and techniques) acquired in the course of providing the Site, and, subject to the confidentiality obligations in the separate contracts referenced in Section 8, you and each Participating Company hereby grant to PowerAdvocate a perpetual, worldwide, paid-up license to use, copy, modify and/or sublicense, in the course of

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PowerAdvocate's business, any Technical Elements acquired or developed as a result of providing the Site.

10. Contact Information

"Contact Information" shall mean any and all contact information (name, address, phone numbers, email address) that you provide to PowerAdvocate during registration for the Energy Intelligence Platform or during any other use of the Site. During registration, you shall provide -- and Participating Company shall ensure that its Users provide -- true, accurate, current and complete Contact Information. During registration or any other use of the Site that collects Contact Information, you will ensure that all Contact Information is office or home office contact information and is not private home contact information. PowerAdvocate uses the Contact Information in furtherance of, and consistent with, the Site and otherwise in its normal course of business. By providing your Contact Information, you provide your consent to PowerAdvocate's contacting you by email or telephone in its normal course of business, including to determine your interest in any PowerAdvocate offerings.

11. Governing Law and Jurisdiction

This Agreement shall be deemed to have been made and performed entirely in the Commonwealth of Massachusetts, and shall be governed by and construed pursuant to the laws of the Commonwealth of Massachusetts without regard to its provisions regarding the conflicts of laws. You and each Participating Company and PowerAdvocate hereby agree the state and federal courts of Massachusetts shall be the exclusive forum and venue to resolve disputes involving PowerAdvocate and arising out of or relating to these Terms of Use or any use of the Site. By using the Site and thereby agreeing to these Terms of Use, you and each Participating Company consent to personal jurisdiction and venue in the state and federal courts in Massachusetts with respect to all such disputes.

12. Amendment

PowerAdvocate may modify this Agreement from time to time by posting the modified Agreement on the Site. Any use of the Site after the posting of the modified Agreement constitutes that user's and that Participating Company's agreement to be bound by such modified version of this Agreement. PowerAdvocate reserves the right to change the Site at its discretion at any time. PowerAdvocate may add or remove features, services or otherwise modify the Site, all without any liability whatsoever.

13. Order of Precedence

THESE TERMS OF USE SHALL NOT ALTER OR OVERRIDE ANY CONFLICTING TERMS AND CONDITIONS OF ANY OTHER WRITTEN CONTRACT THAT YOU OR A PARTICIPATING COMPANY MAY HAVE WITH POWERADVOCATE OR WITH ANOTHER PARTICIPATING COMPANY. In the event of any conflicting terms under a written contract signed by you or a Participating Company with PowerAdvocate and these Terms of Use, the terms of the written contract will prevail over the conflicting terms in these Terms of Use.

14. Miscellaneous

Any notice, report, approval, or consent required or permitted under this Agreement shall be in writing and in the English language. Notices to PowerAdvocate may be sent to Power Advocate, Inc., 179 Lincoln Street, Boston, MA 02111, Facsimile: 857-453-5656, Attention: Daniel P. Sullivan. No failure or delay in exercising any right under this Agreement will operate as a waiver thereof, nor will any partial exercise of any right or power under this Agreement preclude further exercise. If any provision of this Agreement is unenforceable or invalid, that provision shall be limited or eliminated to the minimum extent necessary so that this Agreement shall otherwise remain in full force and effect and enforceable. For all purposes under this Agreement, each party shall be and act as an independent contractor of the other and shall not bind nor attempt to bind the other to any contract with third-parties. No agency, partnership, joint venture, employee-employer, or franchisor-franchisee relationship is intended nor created by this Agreement.



Sourcing Intelligence® Quick Start for Suppliers

PowerAdvocate Sourcing Intelligence enables suppliers to access buyer documents and submit documents over a web-based sourcing platform.

Logging In

1. Launch a web browser and go to www.poweradvocate.com.
2. Click the orange **Login** button.
3. Enter your account **User Name** and **Password** (both are case-sensitive) and click **Login**.
4. Click the **Events** tab if it is not already displayed.

Dashboard

Your Dashboard lists the events you have been invited to. A line divides currently accessible events from others.

Event / Buyer	Msg	Open	Close	Download Documents	Upload Documents	Commercial	Technical	Pricing
190-cbl-1: 190 First St. Cable/Wiring Electric Power Utility		05/16/10 8:00 AM EDT	06/08/10 4:00 PM EDT	1	2	3	4	5
T42g: Colorado River Sluice Gates Great Western Utilities	1/1	04/04/10 10:00 AM EDT	06/30/10 4:00 PM EDT	1	2	3	4	5
1998-01: Grid Expansion Electric Power Utility		09/01/10 8:00 AM EDT	12/29/10 4:00 PM EST	1	2	3	4	5

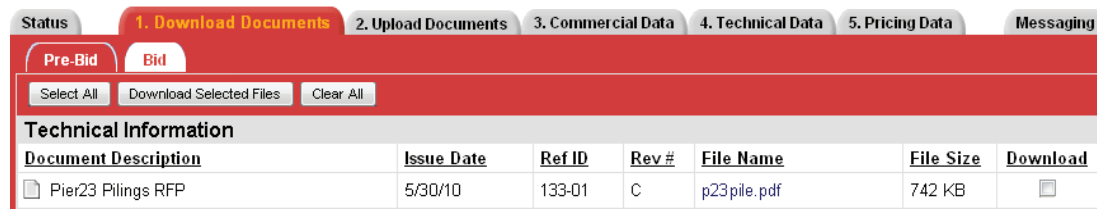
- Click an event name to view its Status tab, which displays a summary of your activity and key event dates. To view specific details of an event, click the buttons **1 2 3 4 5** to view the corresponding tab.
- To return to the Dashboard, click **Dashboard** in the navigation bar at the top of the window.
- An event will not appear on your Dashboard until the Bid Event Coordinator has added you as a participant.

In addition to the Events tab, you may also see:

- An **Opportunities** tab, if a buyer opens an event to all PowerAdvocate suppliers; you can review a high-level event description, and may request full access to the event.
- A **Portals** tab, if a buyer subscribes to PowerAdvocate Supplier Intelligence
- A **Contracts** tab, if a buyer subscribes to PowerAdvocate Contract Intelligence.

Downloading Bid Packages

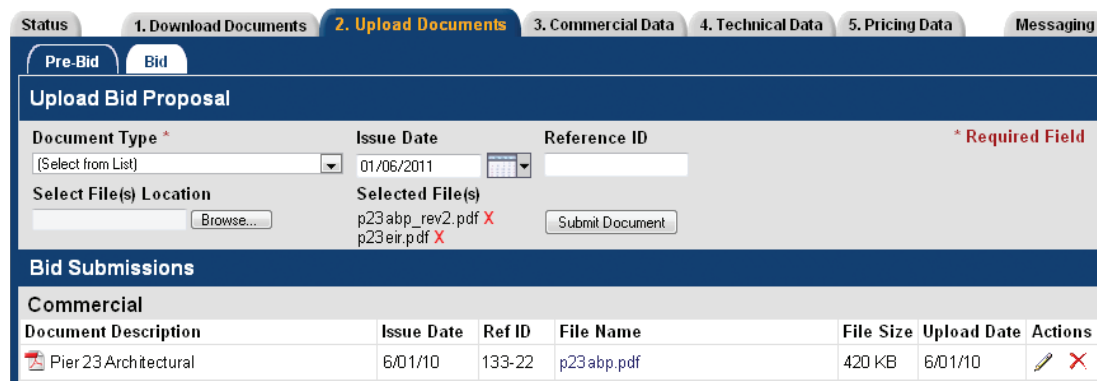
All of the buyer's bid package documents, including specifications and engineering drawings, are centrally stored on the PowerAdvocate platform. To view bid documents, click **1** on your Dashboard or on the **1. Download Documents** tab from within the event.



- You can access the **Bid** sub-tab after the bid opens. You can access Buyer documents before the event from a **Pre-Bid** sub-tab if the buyer requires a Pre-Bid submittal; the buyer must approve your submittal before you can access the **Bid** sub-tab. Likewise, you will see a **Post Bid** sub-tab if the buyer invites you to participate in post-bid negotiations.
- To view or download a document, click the file name; you may be prompted to open or save the file.
- To download multiple documents:
 1. Select the checkbox in the **Download** column for each document you wish to download, or click **Select All**.
 2. Click **Download Selected Files**.
 3. Click **Start** to download a .zip file containing the selected documents.

Uploading Documents

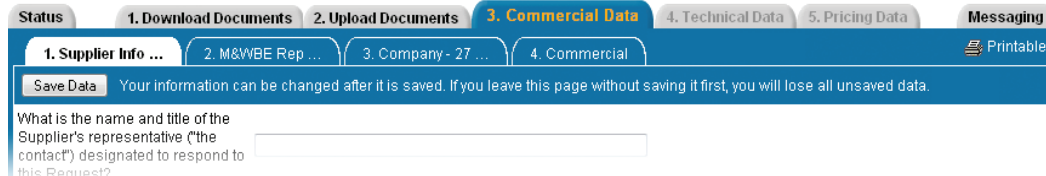
To upload your documents, click **2** on your Dashboard, or on the **2. Upload Documents** tab from within the event.



- As with the **1. Download Documents** tab, you may be able to access and upload documents to **Pre-Bid**, **Bid**, and **Post Bid** sub-tabs as appropriate.
- To upload a document:
 1. Specify a **Document Type**, and edit the Issue Date and Reference ID if necessary.
 2. Click **Browse**, navigate to and select the document, and then click **Open**; multiple files can also be compressed into one .zip file for upload.
 3. Click **Submit Document**.
- Late documents are accepted at the Buyer's option, but are flagged in red text.

Completing Datasheets

To view the event datasheets, click **3** **4** **5** on your Dashboard or on the **3. Commercial**, **4. Technical**, or **5. Pricing** tabs from within the event. Buttons/tabs are grayed out (e.g., **3**) if the buyer did not create a particular type of datasheet.



- Complete the datasheets over the course of the Bid Open period; datasheets may have multiple sub-tabs.
- Click **Save Data** often to avoid data loss. Once the bid closes, saved data is automatically submitted to the buyer.
- Once the bid closes, you are normally unable to modify datasheets. However, at the buyer's option, you may upload additional documents on the **2. Upload Documents** tab (which are flagged as being late).
- To view a printer-friendly version of a datasheet, click **Printable**.

Communicating with the Bid Event Coordinator

Buyer companies use one of two communication options in Sourcing Intelligence: Email or PowerAdvocate Messaging.

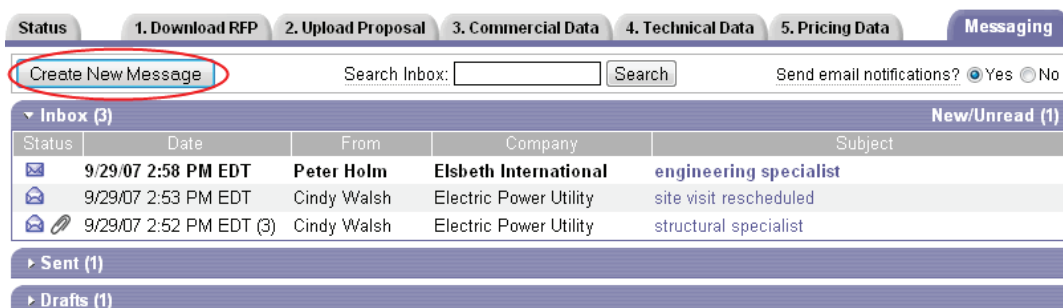
Email

Click the icon next to the Buyer Contact's name to contact them through your default email application (e.g., Outlook).



PowerAdvocate Messaging

To send a message to the Bid Event Coordinator (BEC), go to the **Messaging** tab and click **Create New Message**. To read or reply to a message from the BEC, click the message subject.



- You can send messages to the BEC and Buyer Team; replies are sent your Supplier Team and the Buyer Team.
- BECs can message the Buyer Team and all Supplier Teams at once; Supplier Teams can respond but not see other Supplier Teams' responses.
- Supplier Teams cannot message each other, or see other Supplier Teams' correspondence with the Buyer Team.
- You can receive external email notification of new PowerAdvocate messages.

Getting More Information

- Click **Help** on the navigation bar to display the online help.



Dashboard Profile Company **Help** Logout

- Supplier documentation can be downloaded from the online help system.
- Call PowerAdvocate support at 857-453-5800 (Mon-Fri, 8 a.m. to 8 p.m. Eastern Time) or email support@poweradvocate.com.

May 2016

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PowerAdvocate
179 Lincoln Street
Boston, MA 02111 USA

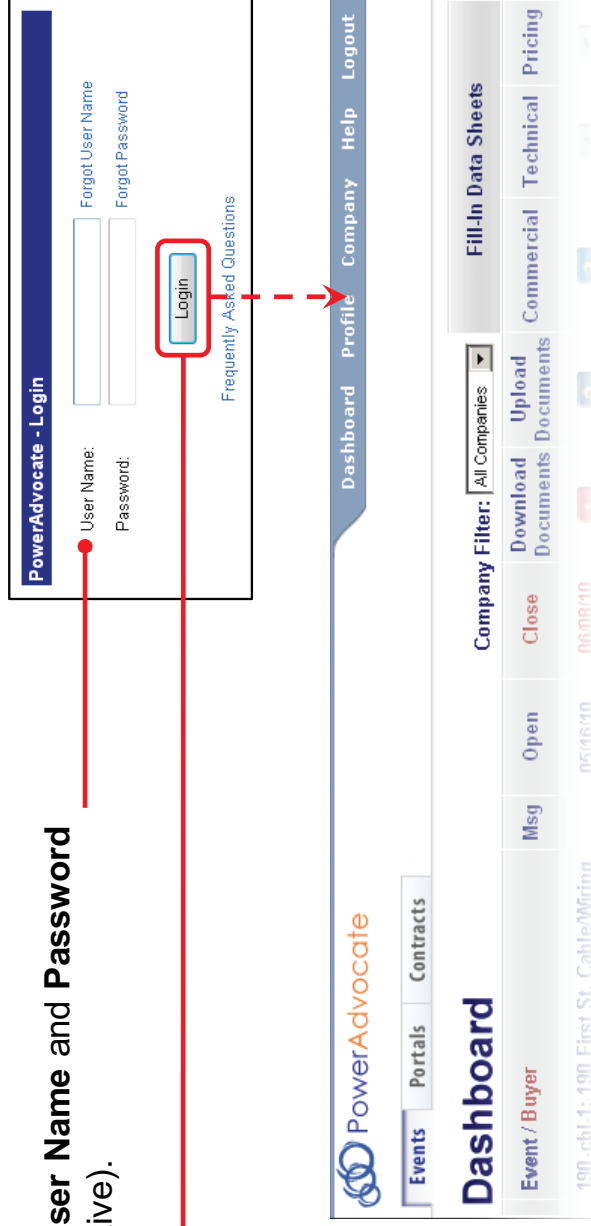
Support: 857.453.5800
Fax: 857.453.5656
Email: support@poweradvocate.com



ers' Frequently Asked Questions
2016

How do I log in to Sourcing Intelligence?

1. Launch a web browser and go to www.poweradvocate.com, and then click the orange **Login** button.
2. Enter your account **User Name** and **Password** (both are case-sensitive).
3. Click **Login**.

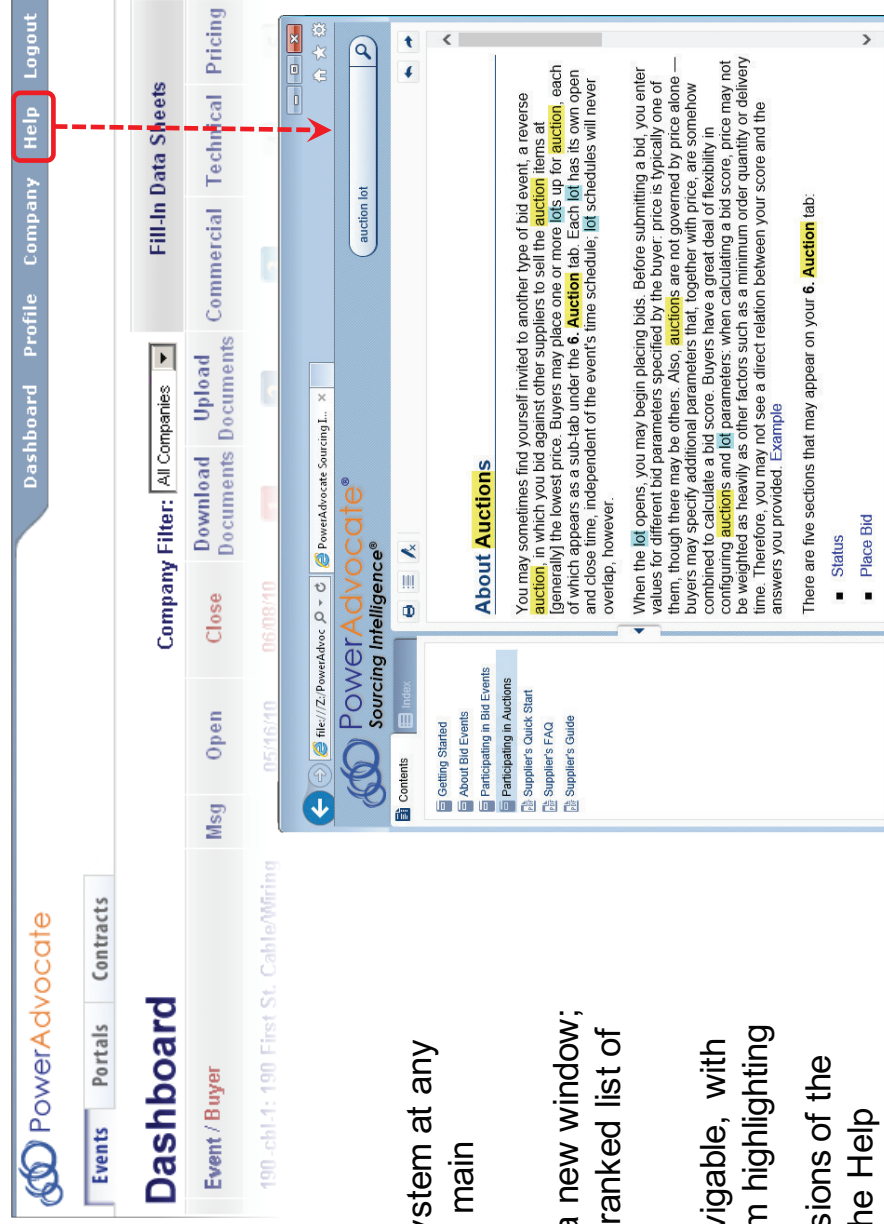


Tips

- Participating in a Reverse Auction requires logging into PowerAdvocate using IE9 or higher.
- If you received an email from a Bid Event Coordinator inviting you to register, follow the instructions in the email to complete the registration process.
- **Portals** and **Contracts** tabs may appear if buyers also subscribe to Supplier Intelligence or Contract Intelligence, respectively. An **Opportunities** tab may also appear, which is described on page 5.

How do I get more information if I need it?

You can contact PowerAdvocate Support at support@poweradvocate.com or by calling 857-453-5800, Monday through Friday (excluding U.S. Federal Holidays) from 8:00 AM to 8:00 PM Eastern Time



The screenshot displays the PowerAdvocate Sourcing Intelligence dashboard. The top navigation bar includes 'Events', 'Portals', and 'Contracts'. The main header area shows 'Dashboard', 'Profile', 'Company', and 'Logout', with the 'Help' link highlighted in a red box. A red dashed arrow points from the 'Help' link to a search bar in the help content area. The search bar contains the text 'auction lot'. The help content area is titled 'About Auctions' and contains text explaining the auction process, including terms like 'lot', 'lot schedule', and 'lot overlap'. A table of contents is visible on the left side of the help content area, listing sections such as 'Getting Started', 'About Bid Events', 'Participating in Bid Events', 'Participating in Auctions', 'Supplier's Quick Start', 'Supplier's FAQ', and 'Supplier's Guide'. The bottom of the dashboard shows a 'Company Filter' dropdown set to 'All Companies' and buttons for 'Download Documents', 'Upload Documents', 'Open', 'Close', 'Msg', and 'Open'.

Online Help

- You can access the Help System at any time by clicking **Help** on the main navigation bar
- The Help System opens in a new window; use full-text search to get a ranked list of relevant help topics
- The Help System is fully navigable, with features such as search term highlighting
- You can download PDF versions of the documentation from within the Help System

What information is displayed on my Dashboard?

Your Dashboard displays all bid events to which you have been invited.

Dashboard		Company Filter: All Companies		Fill-In Data Sheets				
Event / Buyer	Msg	Open	Close	Download Documents	Upload Documents	Commercial	Technical	Pricing
190 -cbl-1: 190 First St. Cable/Wiring Electric Power Utility		05/16/10 8:00 AM EDT	06/08/10 4:00 PM EDT	1	2	3	4	5
142g: Colorado River Sluice Gates Great Western Utilities	1/1	04/04/10 10:00 AM EDT	06/30/10 4:00 PM EDT	1	2	3	4	5
1998-01: Grid Expansion Electric Power Utility		09/01/10 8:00 AM EDT	12/29/10 4:00 PM EST	1	2	3	4	5

Open and Pending Pre-Bid events

Pending (not Pre-Bid) and Closed events

Buying entity

Event name/number

The numbers on the Dashboard represent a general workflow, though you can work in any order:

- 1 Download the bid package.
- 2 Upload bid documents, proposals, etc.
- 3 4 5 Fill in online datasheets if present.

Number of unread/total messages; click to access the **Messaging** tab.

Tips

- If an event is missing a type of datasheet, that number & its corresponding tab are grayed out (e.g., 3).
- Events with links in the **Msg** column use PowerAdvocate Messaging; others use standard email.
- Supplier contacts are invited individually by the buyer

How do I find other supplier opportunities?

Buyer companies have the option to make their bid events visible to all PowerAdvocate-registered suppliers.

When these opportunities exist, your **an Opportunities** tab displays some high-level event information for you to evaluate.

Events		Opportunities				
Opportunities Dashboard						
Event Title	Company	Products / Services	Open Date	Close Date	Accessible	
<input type="checkbox"/> Actuators	Acme Electric	Controls	08/18/2015 8:00 AM EDT	08/31/2015 4:30 PM EDT		
<input type="checkbox"/> Next-Gen Boiler Upgrade	Universal Energy	Boiler Components	08/15/2015 8:00 AM EST	12/31/2015 4:00 PM EST		
Description: Looking for a cutting-edge implementation for a green building in the planning stages.						
<input type="checkbox"/> Project Simulator	Solar Arrays LLC	Construction Services	08/01/2015 8:00 AM EDT	09/07/2015 4:00 PM EDT	Pending	
<input type="checkbox"/> Site 101 Rough-out	Sheridan Builders	Piping	07/01/2015 9:00 AM EDT	12/31/2015 6:00 PM EST		

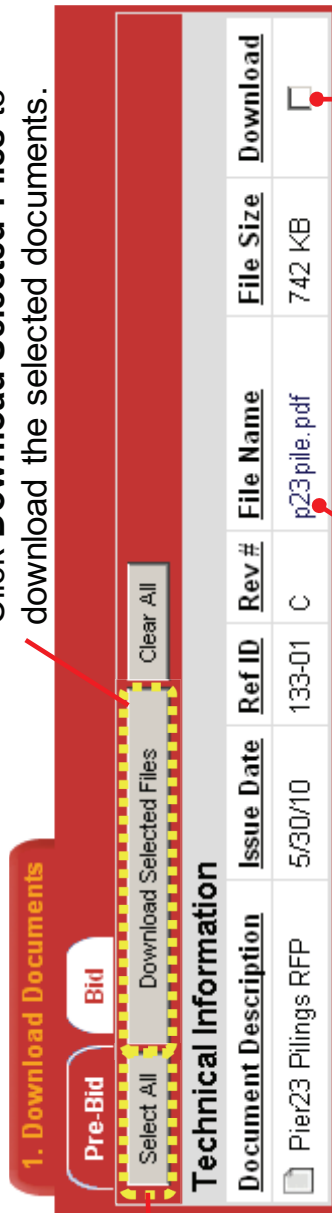
To request access to a posted event:

1. Click . A pop-up appears asking you to verify your qualifications. You may also enter Optional Comments to the buyer, if you have something to add.
2. Click **Submit Request**. The Accessible column will display Pending until the buyer approves your request. Once approved, the event will appear on your Events tab. If the buyer does not approve your request, the event will be removed from your Opportunities tab.

How do I access the buyer's bid package?

Once a buyer invites you to participate in a bid event, that event appears on your Dashboard. You can begin downloading the buyer's bid documents after the event opens. From the Dashboard, click **1** to access the **1. Download Documents > Bid** tab, where you can download the buyer's entire bid package, download selected documents, or view individual documents online.

If the buyer invites you to Pre-Bid, you can access documents from the **1. Download Documents > Pre-Bid** tab before the event opens; the buyer must approve your Pre-Bid submittal before you can access the **Bid** sub-tab. Likewise, a **1. Download Documents > Post Bid** sub-tab indicates an invitation to post-bid negotiations.



Click **Select All** to select all files in the bid package.

Click **Download Selected Files** to download the selected documents.

Click a document **File Name** to open and view it online

If there are multiple documents, you can selectively download them

Tip

➤ Selected documents are saved in a .zip file named **BidPackage-nnnn-n.zip** (nnnn-n is a unique ID).

How do I submit documents to the buyer?

1. Go to the **2. Upload Documents** tab and select the appropriate sub-tab.

2. Upload Documents

Upload Bid Proposal

Document Type * (Select from List) Reference ID * Required Field

Issue Date 01/06/2011

Select File(s) Location Selected File(s)

p23.abp_rev2.pdf X

p23.eir.pdf X

Browse... Submit Document

Bid Submissions

Document Description	Issue Date	Ref ID	File Name	File Size	Upload Date	Actions
Pie23 Architectural	6/01/10	133-22	p23.abp.pdf	420 KB	6/01/10	X

2. Select a **Document Type** and enter a brief **Document Description**.

3. Click **Browse**, navigate to your document, and click **Open**.

4. Click **Submit Document**.

Tips

- **Issue Date** and **Reference ID** are optional, though they are helpful for tracking documents.
- You can add, modify (✎), or delete (X) documents at any time before the event closes.
- There is no limit on the number or size of documents that you can upload; multiple files can also be compressed into a .zip archive for upload.
- Late documents, if the buyer opts to accept them, are flagged in red text.

How do datasheets work?

In addition to your proposal, buyers often request that you complete datasheets as part of your bid package. Datasheets are online forms that allow buyers to collect specific data to tabulate and compare across suppliers.

1. Click one of the datasheet tabs.



2. Fill out the required information in the online form.

3. Click **Save Data**.

Tips

- Multiple users from the same company cannot simultaneously fill out a datasheet — when one user saves, others' work will be lost.
- Be sure to click **Save Data** before navigating elsewhere, or data may be lost. Save your work often.
- There is no **Submit** button. Data is automatically submitted when the bid closes.
- The buyer may block access to datasheets once the bid closes.

How do I communicate with the buyer? (1 of 2)

The buyer uses one of the following messaging options in Sourcing Intelligence:

- **Standard email** – Click an  icon to create a message to the buyer contact in your default email application.



17579 : Widgets and Gizmos **Electric Power Utility**
Open: 08/19/09 08:00:00 AM EDT Close: 09/15/09 04:00:00 PM EDT Time Remaining: 21 days 2 hours 56 mins 5 secs
Buyer Contact: Cathy Walsh  **3. Commercial Data**
Status 1. Download Documents 2. Upload Documents 3. Commercial Data 4. Technical Data 5. Pricing Data 
1. Supplier Info ... 2. M&WBE Rep ... 3. Company - 27 ... 4. Commercial
Save Data Your information can be changed after it is saved. If you leave this page without saving it first, you will lose all unsaved data.

- **PowerAdvocate Messaging** – See the following slide.

How do I communicate with the buyer? (2 of 2)

To create a message in PA Messaging:

1. Click the event's **Messaging** tab or the link in the **Msg** column on your Dashboard.
2. Click **Create New Message**.

Create Message

To: Cindy Walsh, Electric Power Utility (Bid Event Coordinator)
 Cc: Electric Power Utility Buyer Team Members
 Elsiebeth International Bid Team Members
 Elsiebeth Piemot, Elsiebeth International
 Date: 10/20/07 2:13 PM EDT
 Subject: site visit rescheduled

Message:
 [Could we reschedule the Substation #6 visit to 3:30pm?]

Note: Maximum message length is 3000 characters.
 Attachments: Add Attachment

Attachments: Add Attachment
 Date: 10/30/07
 Site#3 site prep Addenda

Buttons: Send Save Draft Close

Send email notifications? Yes No

New/Unread (1)

Status	Date	From	Company	Subject
	9/29/07 2:58 PM EDT	Peter Holm	Elsbeth International	engineering specialist
	9/29/07 2:53 PM EDT	Cindy Walsh	Electric Power Utility	site visit rescheduled
	9/29/07 2:52 PM EDT (3)	Cindy Walsh	Electric Power Utility	structural specialist

View Message

View Message

Subject: site visit rescheduled
 • 10/20/07 8:44 AM EDT, Michael Williams, Electric Power Utility to All Bid Teams
 • 10/30/07 9:46 AM EDT, Cindy Walsh, Electric Power Utility to All Bid Teams

From: Cindy Walsh, Electric Power Utility
 To: Elsiebeth International Bid Team
 Cc: Electric Power Utility Buyer Team
 Date: 10/30/07 9:46 AM EDT
 Subject: site visit rescheduled

Attachments:
 Description: Message Attachment
 Time: 10/30/07

Buttons: Reply Close

To view a message:

- Click the message subject or status icon (/)

Tips

- New messages are sent to the Bid Event Coordinator and copied to the Buyer and Supplier Teams.
- Messages/file attachments are embedded within an event, and cannot be viewed outside of that event.
- Messages are sent to entire teams; one-to-one messaging is not allowed.
- You can choose to receive [external] email notifications of new event-related messages.

DRAFT REQUEST FOR PROPOSALS
FOR
VARIABLE RENEWABLE DISPATCHABLE GENERATION

ISLAND OF O‘AHU

OCTOBER 23, 2017

Docket No. 2017-0352

*Appendix F – Mutual Confidentiality and
Non-Disclosure Agreement*



**Hawaiian
Electric**

APPENDIX F
MUTUAL CONFIDENTIALITY AND NON-DISCLOSURE AGREEMENT
Independent Power Producers – (“IPPs”)

This Mutual Confidentiality and Non-Disclosure Agreement (this “Agreement”) is effective as of _____, 20____ (the “Effective Date”) between [INSERT NAME OF IPP], a [State of incorporation/organization] [type of entity] (“IPP”) and [SELECT ONE OR ALL: Hawaiian Electric Company, Inc./Maui Electric Company, Limited/Hawai‘i Electric Light Company, Inc.] (the “Company”) [Note – if selecting all companies, change the defined term (the “Company”) to (the “Companies”) and replace all references in this document to the “Company” to the “Companies”], a Hawai‘i corporation (“Company”). In consideration of the mutual promises contained in this Agreement, including the provision of Confidential Information (as defined below) by either party to the other hereunder, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. Background

The Company has or intends to issue a Request for Proposals (“RFP”) for renewable energy generation. The IPP has or intends to propose a nominal [] MW, [TYPE OF PLANT] plant located at [LOCATION] on the island of [NAME OF ISLAND], State of Hawai‘i (“Proposal”).

In connection with the IPP’s Project, the Company may conduct an interconnection requirements study (“IRS”) to establish the requirements for interconnection of the IPP’s proposed renewable energy generation facility to the Company’s electric grid. The RFP process may also result in the award of a potential power purchase agreement, the terms of which must be negotiated and agreed upon by the parties (“PPA Negotiations”). For purposes of this Agreement the term “Project” refers to the RFP, Proposal and potential IRS and PPA Negotiations.

In order to evaluate the Project, either party may from time to time provide to the other party certain Confidential Information, as defined herein. The parties are willing to provide such Confidential Information to each other upon the terms and conditions of this Agreement.

2. Confidential Information

Except as set forth in Section 3 below, “Confidential Information” means all non-public, confidential or proprietary information disclosed by either party (the “Provider”) to the other party (a “Recipient”) its affiliates and its and their directors, officers, employees, agents, advisors, consultants (including, without limitation, financial advisors, counsel and accountants) and controlling entities or individuals (collectively, “Representatives”) whether disclosed orally or disclosed or accessed in written, electronic or other form of media, and whether or not marked or otherwise identified as “confidential,” including, without limitation:

(a) all information concerning the Provider and its affiliates', and their customers', suppliers' and other third parties' past, present and future business affairs including, without limitation, finances, customer information, supplier information, products, services, designs, processes, organizational structure and internal practices, forecasts, sales and other financial results, records and budgets, business, marketing, development, sales and other commercial information and strategies;

(b) information concerning the Company's generation, transmission, and distribution systems (e.g., engineering and operating characteristics of the Company's transmission lines and substations) ("Critical Infrastructure Confidential Information");

(c) the Provider's unpatented inventions (whether or not they are patentable), ideas, methods and discoveries, techniques, formulations, development plans, trade secrets, know-how, unpublished patent applications and other confidential intellectual property;

(d) all designs, specifications, documentation, components, source code, object code, images, icons, audiovisual components and objects, schematics, drawings, protocols, processes, and other visual depictions, in whole or in part, of any of the foregoing;

(e) any third-party confidential information included with, or incorporated in, any information provided by the Provider to the Recipient or its Representatives; and

(f) all notes, analyses, compilations, reports, forecasts, studies, samples, data, statistics, summaries, interpretations and other materials ("Notes") prepared by or for the Recipient or its Representatives that contain, are based on, or otherwise reflect or are derived from, in whole or in part, any of the foregoing.

3. Exclusions from Confidential Information

Except as required by applicable federal, state, or local law or regulation, the term "Confidential Information" as used in this Agreement shall not include information that:

(a) at the time of disclosure is, or thereafter becomes, generally available to and known by the public other than as a result of, directly or indirectly, any violation of this Agreement by the Recipient or any of its Representatives; provided, however, that Confidential Information shall not be disqualified as Confidential Information (i) merely because it is embraced by more general or generic information which is in the public domain or available from a third party, or (ii) if it can only be reconstructed from information taken from multiple sources, none of which individually shows the whole combination (with matching degrees of specificity);

(b) at the time of disclosure is, or thereafter becomes, available to the Recipient on a non-confidential basis from a third-party source, provided that such third party is not and was not prohibited from disclosing such Confidential Information to the Recipient by a contractual or other obligation to the Provider;

(c) was known by or in the possession of the Recipient or its Representatives, as established by documentary evidence, prior to being disclosed by or on behalf of the Provider pursuant to this Agreement;

(d) was or is independently developed by the Recipient, as established by documentary evidence, without reference to or use of, in whole or in part, any of the Provider's Confidential Information; or

(e) was or is learned or established entirely from public sources, as established by documentary evidence, without reference to or use of, in whole or in part, any of the Provider's Confidential Information.

The parties acknowledge and understand that the confidentiality obligations of this Agreement apply only to the Confidential Information shared in connection with the Project. The parties may share other information with each other under other agreements, provisions or understandings which are not related to the Project. Such information sharing shall be subject to the provisions of the agreements and confidentiality provisions associated thereto and this Agreement shall not be construed to infringe upon or apply to such agreements or provisions.

4. Non-Disclosure of Confidential Information

Unless otherwise agreed to in writing by the Provider, the Recipient agrees as follows:

(a) except as required by law, not to disclose or reveal any Confidential Information to any person or entity other than its Representatives who are actively and directly participating in the evaluation of the Project or who otherwise need to know the Confidential Information for the purpose of evaluating the Project.

(b) not to use Confidential Information for any purpose other than in connection with its evaluation of the Project or the consummation of the Project.

(c) except as required by law, not to disclose to any person or entity (other than those of its Representatives who are actively and directly participating in the evaluation of the Project or who otherwise need to know for the purpose of evaluating the Project) any information about the Project, or the terms or conditions or any other facts relating thereto, including, without limitation, the fact that discussions are taking place with respect thereto or the status thereof, or the fact that Proprietary Information has been made available to the Recipient or its Representatives.

(d) to use diligent efforts to safeguard and protect the confidentiality of the Confidential Information, including, at minimum, implementing the same commercial measures that the Recipient uses to protect its own confidential information. Before disclosing the Confidential Information to any Representative, the Recipient will inform such Representative of the confidential nature of such information, their duty to treat the Confidential Information in accordance with this Agreement and shall ensure that such Representative is legally bound by the

terms and conditions of this Agreement or subject to confidentiality duties or obligations to the Recipient that are no less restrictive than the terms and conditions of this Agreement.

(e) Any provision herein to the contrary notwithstanding, the Company may disclose Confidential Information to the State of Hawai'i Public Utilities Commission ("Commission") and/or the State of Hawai'i Division of Consumer Advocacy (including their respective staffs) provided that such disclosure is made under a protective order entered in the docket or proceeding with respect to which the disclosure will be made or any general protective order entered by the Commission.

5. Required Disclosure and Notice

If the parties or any of their Representatives become legally compelled (by deposition, interrogatory, request for documents, subpoena, civil investigative demand, court order, or similar process) to disclose any of the Confidential Information, the compelled party shall undertake reasonable efforts to provide the other party with notice within three (3) business days of such requirement or advice prior to disclosure so that the other party may (a) seek a protective order or other appropriate remedy, (b) consult with the other party with respect to the compelled party taking steps to resist or narrow the scope of such requirement or advice, and/or (c) waive compliance, in whole or in part, with the terms of this Agreement. If such protective order or other remedy is not obtained, or the other party waives compliance with the provisions hereof, the compelled party agrees to furnish only that portion of the Confidential Information which it is legally required to so furnish and, at the request of the other party, to use reasonable efforts to obtain assurance that confidential treatment will be accorded such Confidential Information, it being understood that such reasonable efforts shall be at the cost and expense of the party whose Confidential Information has been sought. In any event, neither the IPP nor any of its Representatives will oppose action by the Company to obtain an appropriate protective order or other reliable assurance that confidential treatment will be accorded the Confidential Information.

6. Return or Destruction of Confidential Information

At any time during or after the term of this Agreement, at the Provider's written request, and in any event, upon the termination of the Agreement, the Recipient shall certify within ten (10) business days that it has destroyed all Confidential Information by using industry standard data elimination methods used to prevent unauthorized disclosure of information, and for Personally Identifiable Information (defined as personally identifiable information of individuals, and any information that may be used to track, locate or identify such individuals (or which is otherwise protected by privacy laws), including any automatically generated information (such as IP addresses and other customer identifiers) that identifies or is unique or traceable to a particular individual or computer or other electronic device capable of accessing the internet, including without limitation, name, address, telephone number, social security number, credit card account numbers, email addresses, user identification numbers or names and passwords, which is disclosed to the Recipient or its subcontractors in connection with this Agreement by the Provider, which products and services are used or intended to be used for personal, family or household purposes), such methods shall be consistent with Hawaii Revised Statute 487-R;

provided, however, that with respect to Confidential information in tangible form, the Recipient may return such Confidential Information to the Provider within ten (10) business days in lieu of destruction. The Recipient's sole obligation with respect to the disposition of any Notes shall be to redact or otherwise expunge all such Confidential Information from such Notes and certify to the Provider that it has so redacted or expunged the Confidential Information. Notwithstanding the foregoing, with respect to any Confidential Information stored in Recipient's disaster recovery backups or other electronic archives, Recipient is not required to destroy such Confidential Information if it would impose a material cost or burden; provided, however, such Confidential Information shall be destroyed when such archives are destroyed in accordance with Recipient's records retention policies.

7. Authority

Each party represents and warrants that it has full power and authority to enter into and perform this Agreement, and the person signing this Agreement on behalf of each has been properly authorized and empowered to enter into this Agreement, understands it and agrees to be bound by it.

8. No Representations or Warranties

Neither the Provider nor any of its Representatives make any express or implied representation or warranty as to the accuracy or completeness of any Confidential Information disclosed to the Recipient hereunder, and the Recipient agrees that it is not entitled to rely on the accuracy or completeness of any Confidential Information. Neither the Provider nor any of its Representatives shall be liable to the Recipient or any of its Representatives relating to or arising from the use of any Confidential Information or for any errors therein or omissions therefrom. Notwithstanding the foregoing, the Recipient shall be entitled to rely solely on such representations and warranties regarding Confidential Information as may be made to it in any final agreement relating to the Project, subject to the terms and conditions of such agreement.

9. No Other Obligations

Neither this Agreement nor the disclosure of the Confidential Information shall result in any obligation on the part of either party to enter into any further agreement with the other with respect to the subject matter hereof or otherwise, to purchase any products or services from the other, or to require either party to disclose any further information to the other. Nothing in this Agreement shall be deemed to constitute either party hereto as partner, agent or representative of the other party or to create any fiduciary relationship between the parties. Either party may offer products or services which are competitive with products or services now offered or which may be offered by the other. Subject to the express terms and conditions of this Agreement, neither this Agreement nor discussions and/or communications between the parties will impair the right of either party to develop, make, use, procure, and/or market any products or services, alone or with others, now or in the future, including those which may be competitive with those offered by the other. Whether or not the Project is consummated, neither party shall issue a press release or release any information to the general public concerning such transaction or the absence thereof without the express prior written consent of the other, and the parties agree that neither

party will use the other's name whether by including reference to the other in any press release, list of customers advertising that its services are used by Company or otherwise, without written authorization by the respective party's authorized representative.

10. Property Rights in Confidential Information

All Confidential Information shall remain the sole and exclusive property of the Provider and nothing in this Agreement, or any course of conduct between the parties shall be deemed to grant to the Recipient any license or rights in or to the Confidential Information of the Provider, or any part thereof. Unless otherwise expressly agreed in a separate license agreement, the disclosure of Confidential Information to the Recipient will not be deemed to constitute a grant, by implication or otherwise, of a right or license to the Confidential Information or to any patents or patent applications of the Provider.

11. Publicly Traded Company

The IPP acknowledges that the Company's holding company is a publicly traded company, and that Confidential Information of the Company may constitute material, non-public information with respect to the Company. The IPP understands, and will advise its Representatives to whom Confidential Information of the Company is disclosed, of the restrictions imposed by the United States securities laws on (a) the purchase or sale of securities by any person in possession of material, non-public information with respect to such securities, and (b) the communication of material, non-public information with respect to securities to a person who may purchase or sell such securities in reliance upon such information.

12. Remedies

(a) Each party acknowledges and agrees that any breach or threatened breach of this Agreement may give rise to an irreparable injury to the Provider or its Representatives, for which compensation in damages is likely to be an inadequate remedy. Accordingly, in the event of any breach or threatened breach of this Agreement by the Recipient or its Representatives, the Provider shall be entitled to seek equitable relief, including in the form of injunctions and orders for specific performance, in addition to all other remedies available at law or in equity.

(b) In the event that the Recipient learns of dissemination, disclosure, or use of the Confidential Information which is not permitted by this Agreement, the Recipient shall notify the Provider immediately in writing and shall use reasonable efforts to assist the Provider in minimizing damages from such disclosure. Such remedy shall be in addition to and not in lieu of any other rights or remedies available to the Provider at law or in equity.

13. Cumulative Remedies

No rights or remedy herein conferred upon or reserved to either party hereunder is intended to be exclusive of any other right or remedy, and each and every right and remedy shall be cumulative and in addition to any other right or remedy under this Agreement, or under applicable law, whether now or hereafter existing.

14. Notice

(a) By delivering written notice, either party may notify the other that it no longer wishes to receive or provide Confidential Information. Any further information received or provided by the party who received such notice following receipt of such notice, shall not be subject to the protection of this Agreement.

(b) All notices, consents and waivers under this Agreement shall be in writing and will be deemed to have been duly given when (i) delivered by hand, (ii) sent by electronic mail ("E-mail") (provided receipt thereof is confirmed via E-mail or in writing by recipient), (iii) sent by certified mail, return receipt requested, or (iv) when received by the addressee, if sent by a nationally recognized overnight delivery service (receipt requested), in each case to the appropriate addresses and E-mail Addresses set forth below (or to such other addresses and E-mail addresses as a party may designate by notice to the other party):

(1) Company:

By Mail:

[Choose: Hawaiian Electric Company, Inc., Hawai'i Electric Light Company, Inc., Maui Electric Company, Limited]

P.O. Box 2750

Honolulu, Hawaii 96840

Attn: [TITLE, DEPARTMENT]

Delivered By Hand or Overnight Delivery:

[Choose: Hawaiian Electric Company, Inc., Hawai'i Electric Light Company, Inc., Maui Electric Company, Limited]

[STREET ADDRESS]

[City, State, Zip Code]

Attn: [TITLE, DEPARTMENT]

By E-mail:

[Choose: Hawaiian Electric Company, Inc., Hawai'i Electric Light Company, Inc., Maui Electric Company, Limited]

Attn: [TITLE, DEPARTMENT]

Email: _____

With a copy to:

By Mail:

[Choose: Hawaiian Electric Company, Inc., Hawai'i Electric Light Company, Inc., Maui Electric Company, Limited]

Legal Department

P.O. Box 2750

Honolulu, Hawaii 96840

Delivered By Hand or Overnight Delivery:

[Choose: Hawaiian Electric Company, Inc., Hawai'i Electric Light Company, Inc., Maui Electric Company, Limited]

American Savings Bank Tower
1001 Bishop Street, Suite 1100
Honolulu, Hawaii 96813
Attn: Legal Department

By E-mail:

[Choose: Hawaiian Electric Company, Inc., Hawai'i Electric Light Company, Inc., Maui Electric Company, Limited]

Legal Department
Email: legalnotices@hawaiianelectric.com

(2) **[Purchaser][Vendor][Supplier]**

By Mail:

[INSERT ADDRESS/CONTACT]

Delivered By Hand or Overnight Delivery:

[INSERT ADDRESS/CONTACT]

By E-mail:

[INSERT ADDRESS/CONTACT]

With a copy to:

By Mail:

[INSERT ADDRESS/CONTACT]

Delivered By Hand or Overnight Delivery:

[INSERT ADDRESS/CONTACT]

By E-mail:

[\[INSERT ADDRESS/CONTACT\]](#)

15. No Waiver

Except as otherwise provided in this Agreement, no delay or forbearance of a party in the exercise of any remedy or right will constitute a waiver thereof, and the exercise or partial exercise of a remedy or right shall not preclude further exercise of the same or any other remedy or right.

16. Governing Law

This Agreement is made under, governed by, construed and enforced in accordance with, the laws of the state of Hawaii. Any action brought with respect to the matters contained in this Agreement shall be brought in the federal or state courts located in the State of Hawaii. Each party agrees and irrevocably consents to the exercise of personal jurisdiction over each of the parties by such courts and waives any right to plead, claim or allege that the State of Hawaii is an inconvenient forum or improper venue. Notwithstanding the foregoing, Company, at its option, may elect to submit any such dispute to binding arbitration pursuant to the commercial arbitration rules of Dispute Prevention & Resolution, Inc. or the American Arbitration Association then in effect in which case the parties agree that any alternative dispute resolution shall take place in the State of Hawaii.

17. 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, then the prevailing party in such proceeding shall be awarded its reasonable attorneys' fees and costs.

18. Assignment Prohibited

This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors, legal representatives, and permitted assigns. Neither party shall have the right to assign any of its rights, duties or obligations under this Agreement, by operation or law or otherwise, without the prior written consent of the other party. Any purported assignment in violation of this section shall be null and void.

19. No Third Party Beneficiaries

Nothing expressed or referred to in this Agreement will be construed to give any person or entity other than the parties any legal or equitable right, remedy, or claim under or with respect to this Agreement or any provision of this Agreement. This Agreement and all of its provisions and conditions are for the sole and exclusive benefit of the parties and their successors and permitted assigns.

20. Entire Agreement

This Agreement constitutes the entire agreement between the Parties relating to the subject matter hereof, superseding all prior and contemporaneous agreements, understandings or undertakings, oral or written with respect to the subject matter. Any amendment or modification of this Agreement or any part hereof shall not be valid unless in writing and signed by the Parties. Any waiver hereunder shall not be valid unless in writing and signed via by the Party against whom waiver is asserted.

21. Term and Survival

This Agreement shall remain in full force and effect for a period of two (2) years from the Effective Date. All confidentiality obligations within this agreement shall survive following expiration or termination of this Agreement.

22. Severability

If any term or provision of this Agreement, or the application thereof to any person, entity or circumstances is to any extent invalid or unenforceable, the remainder of this Agreement, or the application of such term or provision to persons, entities or circumstances other than those as to which it is invalid or unenforceable, shall not be affected thereby, and each term and provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law, and the parties will take all commercially reasonable steps, including modification of the Agreement, to preserve the economic "benefit of the bargain" to both parties notwithstanding any such aforesaid invalidity or unenforceability.

23. Negotiated Terms

The parties agree that the terms and conditions of this Agreement are the result of negotiations between the parties and that this Agreement shall not be construed in favor of or against any party by reason of the extent to which any party or its professional advisors participated in the preparation of this Agreement.

24. Counterparts and Electronic Signatures

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. The parties agree that this Agreement and any subsequent writings, including amendments, may be executed and delivered by exchange of executed copies via E-mail or other acceptable electronic means, and in electronic formats such as Adobe PDF or other formats mutually agreeable the parties which preserve the final terms of this Agreement or such writing. A party's signature transmitted by E-mail or other acceptable electronic means shall be considered an "original" signature which is binding and effective for all purposes of this Agreement.

[Signature Page Follows]

IN WITNESS WHEREOF, each party has caused this Agreement to be executed on its behalf by a duly authorized representative, all as of the Effective Date.

[Select: HAWAIIAN ELECTRIC COMPANY, INC. or HAWAI'I ELECTRIC LIGHT COMPANY, INC. or MAUI ELECTRIC COMPANY, LIMITED]

("Company")

By: _____

Print Name: _____

Its: _____

[Insert Name of IPP]

("IPP")

By: _____

Print Name: _____

Its: _____

DRAFT REQUEST FOR PROPOSALS
FOR
VARIABLE RENEWABLE DISPATCHABLE GENERATION
ISLAND OF O‘AHU

OCTOBER 23, 2017

Docket No. 2017-0352

Appendix G – Description of Available Sites



**Hawaiian
Electric**

**APPENDIX G
VARIABLE RENEWABLE DISPATCHABLE GENERATION
DESCRIPTION OF AVAILABLE SITES**

On December 12, 2016, the Hawaiian Electric Companies issued a Land Request for Information (“Land RFI”) seeking information on available land for potentially siting future utility scale renewable energy projects on the islands of O’ahu, Maui, Moloka’i, Lana’i, and Hawai’i. Information from responding landowners is available upon request by following the instructions at <http://hawaiianelectric.com/landrfi>.

This information is being provided for proposers’ consideration only. Project proposals submitted in response to this RFP are not required to be sited at a location identified through the Land RFI. Hawaiian Electric also makes no representations as to the suitability of the listed sites for renewable energy production with regard to resource quality, interconnection constraints, zoning and permitting issues, community support, or other issues. Proposers should perform their own evaluation of these factors in determining whether a site is suitable for renewable energy project development. After further evaluation, proposers that are interested in any of the identified Land RFI parcels are invited to engage in further discussions directly with landowners to negotiate any required rights to use the property.

Additionally, the following links to a few publicly available resources relating to renewable energy project siting and development from the Hawaii State Energy Office are being provided for use at proposers’ sole discretion:

Project Permitting Assistance and Resources

<http://energy.hawaii.gov/developer-investor/project-permitting-assistance-and-resources>

Provides numerous resources to support more informed and appropriate project siting and permitting, including the Permit Guide, Renewable Energy Permitting Consultants, DOH, ePermitting Portal, Renewable EnerGIS, Permitting Wizard, and the Renewable Energy Projects Directory.

Hawaii Clean Energy Programmatic Environmental Impact Statement

<http://energy.hawaii.gov/testbeds-initiatives/hawaii-clean-energy-peis/peis-overview>

The Hawaii Clean Energy Programmatic Environmental Impact Statement (PEIS) analyzes, at a programmatic level, the potential environmental impacts of clean energy activities and technologies in the following clean energy categories: (1) Energy Efficiency, (2) Distributed Renewables, (3) Utility-Scale Renewables, (4) Alternative Transportation Fuels and Modes, and (5) Electrical Transmission and Distribution

Hawaii Statewide GIS Program

<http://planning.hawaii.gov/gis/>

Provides Hawaii GIS data and other resources to support site identification and analysis

Aloha Aina: A Framework for Biocultural Resource Management in Hawai‘i’s Anthropogenic Ecosystems

https://nmshawaiihumpbackwhale.blob.core.windows.net/hawaiihumpbackwhale-prod/media/archive/council/pdfs/aloha_aina.pdf

A framework developed by the Hawaiian Islands Humpback Whale National Marine Sanctuary Advisory Council to integrate Native Hawaiian and Western scientific management approaches toward ecosystem management. While intended for the Sanctuary, this document provides useful insight into successful collaboration in Hawaii.

DRAFT REQUEST FOR PROPOSALS
FOR
VARIABLE RENEWABLE DISPATCHABLE GENERATION
ISLAND OF O‘AHU

OCTOBER 23, 2017

Docket No. 2017-0352

Appendix H – (Reserved)



**Hawaiian
Electric**

DRAFT REQUEST FOR PROPOSALS
FOR
VARIABLE RENEWABLE DISPATCHABLE GENERATION
ISLAND OF O‘AHU

OCTOBER 23, 2017

Docket No. 2017-0352

*Appendix I – Interconnection Facilities and
Cost Information*



**Hawaiian
Electric**

Developers are responsible for the cost of interconnecting their project with the Hawaiian Electric system. To assist developers in assessing the impacts of location on potential projects, the per unit cost figures provided in the sections and tables below are to be used to provide an approximate estimated cost for interconnecting, including substation, communications, and transmission or distribution line cost to the existing Hawaiian Electric System. The per-unit cost figures below should not be used to create a detailed project estimate. A detailed project estimate typically requires a certain level of engineering to assess project site conditions and to factor in other parameters specific to the project.

The project proposal must identify the components assumed for their project and the quantity assumed for each. Each table below provides notes on the assumptions for each of the unit cost estimates. If a proposed project’s requirements are different than what is assumed in the notes, the developer must identify each difference and provide an estimated additional cost or savings resulting from those different requirements.

2.1 Transmission & Distribution Line Interconnection Costs

Component	Description	Cost per mile
1	New 138 kV Overhead line (accessible 500' spans)	\$4,185,000
2	New 46 kV Overhead line (accessible 250' spans)	\$980,000
3	New 12 kV Overhead line (accessible 150' spans)	\$1,168,000
4	New 138 kV Overhead line (inaccessible 500' spans)	\$5,217,000
5	New 46 kV Overhead line (inaccessible 250' spans)	\$1,636,000
6	New 12 kV Overhead line (inaccessible 250' spans)	\$1,623,000
7	138 kV overbuild on existing 46 kV line (accessible 500' spans)	\$4,869,000
8	46 kV overbuild on existing 12 kV line (accessible 250' spans)	\$1,875,000
9	138 kV overbuild on existing 46 kV line (inaccessible 500' spans)	\$6,144,000
10	46 kV overbuild on existing 12 kV line (inaccessible 250' spans)	\$3,235,000
11	New 138 kV Underground line Dielectric Cable	\$10,365,000

Notes:

1. Easement and/or land costs are NOT included with these estimates.
2. EA/EIS cost are NOT included with these estimates.
3. All estimates are provided in 2019 dollars.
4. Components 2, 3, 5, 6, 8 and 10 assume wood pole construction.
5. Components 1, 4, 7 and 9 assume steel pole construction.
6. Overbuilding of lines assumes removal/replacement of all existing poles.

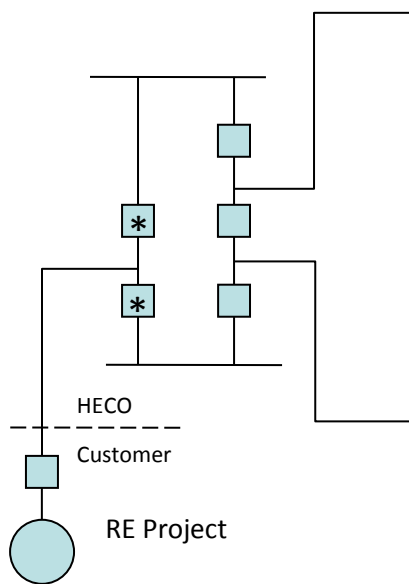
Hawaiian Electric Company
 APPENDIX I- INTERCONNECTION FACILITIES AND COST INFORMATION 2017

7. All estimates are single respective circuits (i.e. single 46 kV circuit or single 138 kV circuit with single 46 kV circuit underbuild).
8. Component 11 assumes 2 cables per phase and does NOT include duct bank and MH installation.

2.2 Substation Interconnection Costs (Please Note: Requirements for Variable and Firm projects may differ)

2.2.1 Substation Interconnection Costs VARIABLE Projects

2.2.1.1 Substation (138kV) Interconnection Costs VARIABLE Projects



Component	Description	Cost
1	*2 – 138 kV circuit breaker addition to Existing Switching Station (HECO)	\$4,301,000

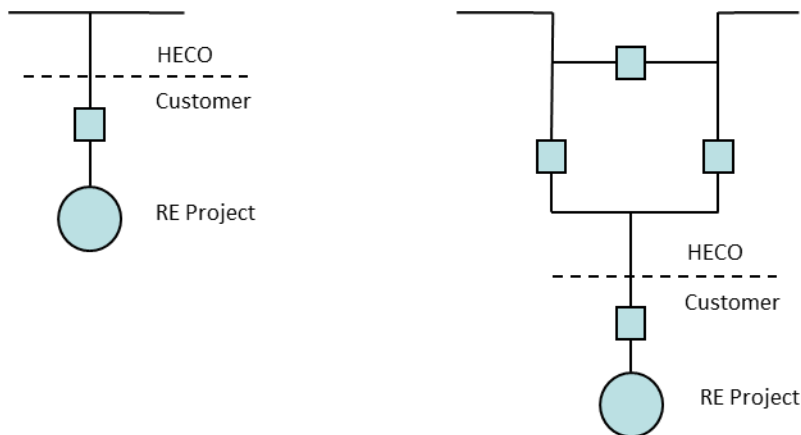
Notes:

1. Existing substation has been built to accommodate the addition of this 138kV breaker-and-a-half bay, including all groundwork (grading, grounding, rockfill, driveway, etc.) and fencing. Groundwork and fencing is not included in this estimate.
2. Costs are in 2017 dollars.

Hawaiian Electric Company
 APPENDIX I- INTERCONNECTION FACILITIES AND COST INFORMATION 2017

3. Estimate does not contain any of the following costs: Telecom, Relay Coordination Study, Land Cost, Environmental Assessment/Environmental Impact Statement, or Project Management.
4. Substation relay protection requirements have not been identified, so costs are based upon typical circuit breaker and line protection relaying requirements.

2.2.1.2 Substation (46kV) Interconnection Costs VARIABLE Projects



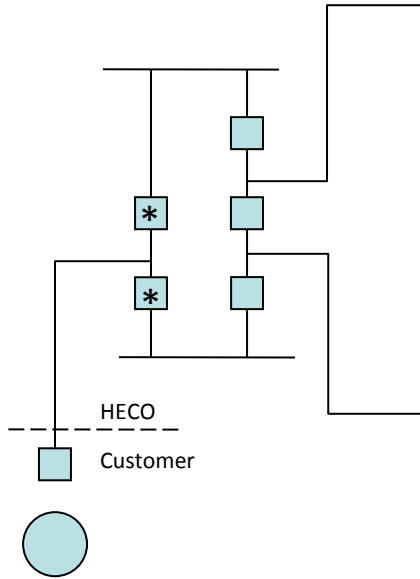
Component	Description	Cost
1	1 – 46 kV Breaker Switching Station	\$4,960,000
2	3 – 46 kV Breaker Switching Station	\$7,383,000

Notes:

1. Substation land that is received has been graded per Hawaiian Electric’s civil and structural requirements. Costs for excavation and fill are not included in the estimates.
2. Costs are in 2017 dollars.
3. Estimate does not contain any of the following costs: Telecom, Relay Coordination Study, Land Cost, Environmental Assessment/Environmental Impact Statement, or Project Management.
4. Substation relay protection requirements have not been identified, so costs are based upon typical circuit breaker and line protection relaying requirements.
5. Control house and SCADA are included in cost estimates.
6. The estimate is for a switching station, which does not contain any transformers.
7. Substation costs for interconnection on the 12.5 kV distribution system will involve equipment changes at the 46 kV level to accommodate reverse flow from projects at the minimum bid size of 5 MW. The scope of work will be highly dependent on location and therefore, pending IRS results, the same 46 kV estimate should apply.

2.2.2 Substation Interconnection Costs FIRM Projects

2.2.2.1 Substation (138kV) Interconnection Costs FIRM Projects

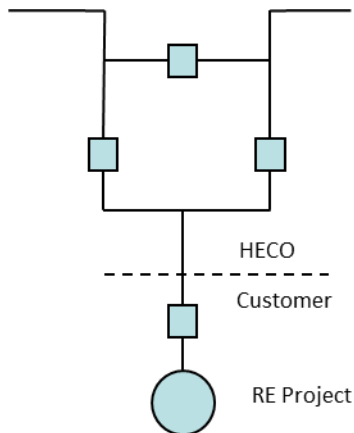


Component	Description	Cost
1	*2 – 138 kV circuit breaker addition to Existing Switching Station (HECO)	\$4,301,000

Notes:

- Existing substation has been built to accommodate the addition of this 138kV breaker-and-a-half bay, including all groundwork (grading, grounding, rockfill, driveway, etc.) and fencing. Groundwork and fencing is not included in this estimate.
- Costs are in 2017 dollars.
- Estimate does not contain any of the following costs: Telecom, Relay Coordination Study, Land Cost, Environmental Assessment/Environmental Impact Statement, or Project Management.
- Substation relay protection requirements have not been identified, so costs are based upon typical circuit breaker and line protection relaying requirements.

2.2.2.2 Substation (46kV) Interconnection Costs FIRM Projects



Component	Description	Cost
1	3 – 46 kV Breaker Switching Station	\$7,383,000

Notes:

1. Substation land that is received has been graded per Hawaiian Electric’s civil and structural requirements. Costs for excavation and fill are not included in the estimates.
2. Costs are in 2017 dollars.
3. Estimate does not contain any of the following costs: Telecom, Relay Coordination Study, Land Cost, Environmental Assessment/Environmental Impact Statement, or Project Management.
4. Substation relay protection requirements have not been identified, so costs are based upon typical circuit breaker and line protection relaying requirements.
5. Control house and SCADA are included in cost estimates.
6. The estimate is for a switching station, which does not contain any transformers.
7. Substation costs for interconnection on the 12.5 kV distribution system will involve equipment changes at the 46 kV level to accommodate reverse flow from projects at the minimum bid size of 5 MW. The scope of work will be highly dependent on location and therefore, pending IRS results, the same 46 kV estimate should apply.

2.3 Telecommunication Interconnection Costs

1. Point-to-point microwave: \$1,074,000 with the following assumptions:
 - a. There is line-of-sight between the communications endpoints.
 - b. FCC licensed Microwave Frequencies are available.
 - c. There are existing structures/buildings and available space on either end to house the radio equipment.

Hawaiian Electric Company
 APPENDIX I- INTERCONNECTION FACILITIES AND COST INFORMATION 2017

- d. Telecommunications grounding standards are up-to-date at both sites.
- e. 48 V DC power with 12 hour battery backup is available.
- f. This estimate does not include any special site-specific permit/approval that may be required.
- g. Space is available to locate antenna towers/structures at both ends. Meets category 5 hurricane wind loading.
- h. Interconnection to Hawaiian Electric’s existing communications is not included.

2. Fiber with overbuild and new construction with the following assumptions:

Component	Description	Cost per mile
1	Fiber underbuild on existing poles (accessible 500’ spans)	\$349,000
2	Fiber underbuild on existing poles (accessible 150’ spans)	\$515,000

- a. The poles are in good condition and do not need replacing or reframing.
 - b. The poles are not overloaded.
 - c. The poles and the attachments are in accordance with NESC 2002 and no work is required to upgrade the poles to current standards.
 - d. 48-strand Singlemode Fiber optic cable, All Dielectric Self-Supporting (ADSS) Cable
3. Supervisory Control and Data Acquisition (SCADA) Communications: \$84,000 with the following assumptions:
- a. 1.5 Mbps leased communications circuit is typically used for SCADA (Supervisory Control and Data Acquisition) applications via Fiber optics, or Ground Potential Rise (GPR) equipment where required.
 - b. Existing leased communications network is in close proximity to the substation.
 - c. Space is provided in control house or cabinet
4. Direct Transfer Trip equipment: \$249,000 per link with the following assumptions:
- a. Space is provided in control house or cabinet with power, GPS timing, and grounding.
 - b. Point-to-point communication (Hawaiian Electric Fiber or Microwave) is available between the developer substation and Hawaiian Electric substation
 - c. If Hawaiian Electric communications links are unavailable, Hawaiian Telecom leased T1 is required, costs are not included in this estimate.

For interconnections to the Hawaiian Electric System at 12 kV or lower, telephone lines may be used to maintain the stability of the electric grid as specified in applicable Interconnection Requirements Studies.

DRAFT REQUEST FOR PROPOSALS
FOR
VARIABLE RENEWABLE DISPATCHABLE GENERATION

ISLAND OF O‘AHU

OCTOBER 23, 2017

Docket No. 2017-0352

Appendix J – Rule 19 Tariff



**Hawaiian
Electric**

RULE NO. 19

Interconnection and Transmission Upgrades

A. GENERAL

1. Definitions

- a. "Betterment" means and includes any upgrading to a facility made solely for the benefit of and at the election of the Company, not attributable to the interconnection requirements. The Betterment includes any provisions for future expansion which cannot be charged to replacement. It also includes any related system work beyond that required for interconnection. If an existing facility is replaced with one of greater functional capacity or capability, the difference between the upgraded facility and a replacement facility of equivalent functional capacity is considered Betterment. It does not mean the substitution of a replacement facility for an existing facility, that is, an underground facility for an overhead facility, unless otherwise provided for in the RFP.

Example 1: A substation with a three breaker scheme is required to connect the Generating Facility to the grid. If the Company installs a substation with a six breaker ring bus scheme, the difference between installing a substation with a three breaker scheme and one with a six breaker scheme would be the Betterment.

Example 2: A transmission line needs to be upgraded to accommodate a new Generating Facility. The existing line is designed to withstand a 56 mph wind speed. The project includes upgrading the facilities to withstand a 100 mph wind speed. The increase in the design to the 100 mph wind speed criteria would be the Betterment.

Example 3: A transmission line needs to be upgraded to accommodate a new Generating Facility. In response to the Company's application to upgrade the line, the Commission orders that the line be placed underground. The cost difference between the overhead upgrade and the installation of the underground facilities would not be considered Betterment.

- b. "Company's Dispatch" means the Company's sole and absolute right to control, from moment to moment, through Supervisory Control, or otherwise, and in accordance with good engineering and operating practices in the electric utility industry, the rate of delivery of energy offered by the bidder to the Company.
- c. "Company's System" means the electric system owned and operated by the Company (to include any non-utility owned facilities) consisting of power plants, transmission and distribution lines, and related equipment for the production and delivery of electric power to the public.

HAWAIIAN ELECTRIC COMPANY, INC.

RULE NO. 19 - Continued

Interconnection and Transmission Upgrades

- d. "Distribution System" means all electrical wires, equipment, and other facilities at the distribution voltage levels (such as 25kV, 12kV, or 4kV) owned or provided by the Company, through which the Company provides electrical service to its customers.
- e. "Framework" means the Framework for Competitive Bidding dated December 8, 2006, adopted by the Commission in Docket No. 03-0372, Decision and Order No. 23121, which provides the mechanism for acquiring a future energy generation resource or a block of generation resources by the Company.
- f. "Generating Facility" means a bidder or utility-owned electrical energy generation resource that is interconnected to the Company electrical grid.
- g. "Grid Connection Point" means the point at which Interconnection Facilities connect to the Company's System, normally the Company's transmission grid. Facilities from the Generating Facility to the Grid Connection Point shall be considered Interconnection Facilities (see examples given in Attachment A). The Grid Connection Point will be identified in the IRS.
- h. "Interconnection Agreement" means a contract with the bidder that specifies the terms and conditions under which Interconnection Facilities (and, in some cases, certain System Upgrades) will be designed, installed, paid for, owned, operated and/or maintained. In some instances, such terms and conditions may be included in the PPA with a bidder, instead of in a separate Interconnection Agreement.
- i. "Interconnection Facilities" means the equipment and devices required to permit a Generating Facility to operate in parallel with and deliver electric energy to Company's System and provide reliable and safe operation of, and power quality on, the Company's System (in accordance with applicable provisions of the Commission's General Order No. 7, Company tariffs, operational practices and planning criteria), such as, but not limited to, transmission and distribution lines, transformers, switches, and circuit breakers.

Example 1: A wind farm facility constructed on a neighbor island (e.g. Molokai) that exports to the Company the energy it produces would be required to install undersea transmission lines to interconnect the Generating Facility to the Company's System. The undersea transmission lines and related facilities would be considered Interconnection Facilities.

HAWAIIAN ELECTRIC COMPANY, INC.

RULE NO. 19 - Continued

Interconnection and Transmission Upgrades

Example 2: A proposed Generating Facility is remotely located in a region of the island where there are no existing Transmission System facilities. In this case, if the size of the Generating Facility requires that it be tied to the existing Transmission System, the new Transmission System facilities (i.e. all electrical wires, equipment, and other facilities at the transmission voltage level) constructed from the Generating Facility to the Company's existing Transmission System facilities would be considered Interconnection Facilities.

- j. "Interconnection Requirements Study (IRS)" means a study, performed in accordance with the terms of the IRS Letter Agreement and with the applicable terms of the RFP and any resulting PPA, to identify the Interconnection Facilities, System Upgrades and other system requirements and all associated costs to integrate the proposed Generating Facility with the Company's System, and includes a detailed steady-state and a dynamic analysis. The IRS is conducted by the Company or its consultant and the bidder is responsible for the cost of conducting the IRS.
- k. "Interconnection Requirements Study Letter Agreement (IRS Letter Agreement)" means the letter agreement and any written, signed amendments thereto, between the Company and the bidder that describes the scope, schedule, and payment arrangements for the IRS.
- l. "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.
- m. "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.
- n. "Point of Interconnection" means the point of delivery of Energy and/or Capacity supplied by the bidder to the Company, where the facilities owned by the bidder interconnect with the facilities owned or to be owned by the Company. The bidder shall own and maintain the facilities from the Generating Facility to the Point of Interconnection. The Company shall own and maintain the facilities from the Point of Interconnection to the Company's System (see examples given in Attachment A). The Point of Interconnection will be identified in the IRS.
- o. "PPA" means a power purchase agreement or contract by the Company to purchase firm capacity, energy, or both.

HAWAIIAN ELECTRIC COMPANY, INC.

RULE NO. 19 - Continued

Interconnection and Transmission Upgrades

- p. "Renewable Energy Facility" means a Generating Facility that generates electricity using renewable energy as the source.
- q. "RFP" means a written request for proposal issued by the Company to solicit bids from interested third-parties, and where applicable from the Company or its affiliate, to supply a future generation resource or a block of generation resources to the Company pursuant to a competitive bidding process.
- r. "Subtransmission System" means all electrical wires, equipment, and other facilities at the subtransmission voltage levels (such as 46kV, 35kV, or 23kV) owned or provided by the Company, through which the utility provides electrical service to its customers.
- s. "Supervisory Control" means remote monitoring and/or control of a Generating Facility's power output and interrupting device status by means of a communication channel that is acceptable to the Company. For Generating Facilities intending to export power with an aggregate export capacity greater than 250kW, computerized supervisory control may be required to ensure the safety of working personnel and prompt response to system abnormalities in case of islanding of the Generating Facility. The Company shall determine the need for supervisory control based upon the results of the initial technical screening and/or IRS. Supervisory control shall include at a minimum monitoring of: (a) gross generation by the Generating Facility; (b) feedback of Watts, Vars, WattHours, current and voltage; (c) Vars furnished by the utility; and (d) status of the interrupting device. In addition, the supervisory control will allow the Company to trip the interrupting device during emergency conditions. Monitoring will be performed by system dispatchers or operators at the Company's control center.
- t. "System Benefit" means a material increase in power flow capability or in the reliability of the Company's electrical system from a system-wide perspective.
- u. "System Upgrades" means improvements made to the Company's System, other than the Interconnection Facilities, required to provide reliable and safe operation of, and power quality on, the Company's System (in accordance with applicable provisions of the Commission's General Order No. 7, Company tariffs, operational practices and planning criteria) when the Generation Facility is interconnected with the Company's System (see Attachment A). Such improvements may include, but are not limited to, new transmission or distribution lines, reconstruction or reconductoring of existing lines, circuit breakers, switches, transformers, buses, protective devices, communications, and substation equipment and facilities.

HAWAIIAN ELECTRIC COMPANY, INC.

RULE NO. 19 - Continued

Interconnection and Transmission Upgrades

v. "Transmission System" means all electrical wires, equipment, and other facilities at the transmission voltage levels (such as 138kV or 69kV) owned or provided by the utility, through which the utility provides electrical service to its customers.

2. Application of Tariff

This Tariff shall apply to an RFP issued pursuant to the Framework and Interconnection Requirement Studies arising from the RFP process. In the event that there is a conflict between any provision of this Tariff and that of an RFP issued pursuant to the Framework and reviewed by the Commission in accordance with Sections III.B.2 and IV.B.6.e. of the Framework, the provisions of the RFP shall prevail. The terms and conditions established in a PPA arising from the RFP and approved by the Commission shall ultimately control over the requirements and terms of both this Tariff and the RFP.

3. Independent Observer

As established in the Framework, the duties and responsibilities of an Independent Observer (IO) include, among other duties and responsibilities, reviewing and monitoring the Company's communications, methods, and implementation of this Tariff, the RFP and related IRS processes.

B. INTERCONNECTION STUDY PROCESS FOR COMPETITIVE BIDDING

1. RFP Package Data -- available to all prospective bidders.

RFP packages issued by the Company shall contain general and regional system information to provide prospective bidders with high level guidance relating to the Company's existing transmission infrastructure. For example, RFP packages may include information in the form of an island map with areas of the Transmission System identified that are at or near their loading limits to provide high level guidance to bidders on areas of the island with transmission constraints. These constraints may include "load pockets", which are load-driven transmission constraints as well as areas of generation-driven transmission constraints. Because transmission impacts are to a large extent specific to the characteristics of supply-side proposals, definitive transmission information cannot be provided in these maps. Detailed geographic maps of the transmission system may not be part of this information due to security concerns. Rather, a map of the island with areas of the map shaded to identify areas (rather than circuits) of transmission constraints, may be provided.

HAWAIIAN ELECTRIC COMPANY, INC.

RULE NO. 19 - Continued

Interconnection and Transmission Upgrades

In addition, the RFP shall include applicable transmission planning criteria that will be used in the determination of interconnection requirements and potential Transmission System impacts. The information in the bid package will provide bidders with information (a) that should help in the selection of the proposed project's characteristics, including project site, project size, and project mode of operation, and (b) to estimate the interconnection requirements associated with their Generating Facilities and the opportunity to reflect the costs of the interconnection requirements in their bids.

2. Information Requests During Bidding Process - available to all prospective bidders.

During the bidding process, if a prospective bidder requires clarification or additional technical or operational information pertaining to the Company's System, a written request with specific questions may be submitted to the Company in accordance with the requirements set forth in the RFP. The written request, specific questions, and written Company response will be provided to all bidders.

3. RFP Requirements and Threshold Criteria Screening - evaluation performed on all bids received

Each bid received will be reviewed to ensure that it satisfies all of the RFP and threshold criteria requirements. The Company will determine whether each bid conforms to the specified RFP requirements and meets the minimum threshold criteria. Applicable performance standards may be part of the threshold criteria. These performance standards may vary depending upon factors such as the size of the generating resource(s) being acquired in the RFP, the Company's ability to dispatch the Generating Facility, the operational status (e.g., as-available vs. firm) of the Generating Facility, and the fuel type of the Generating Facility (e.g., run-of-the-river hydro may have different performance standards from wind power).

4. High Level Evaluation -- performed on all bids that pass threshold screening in RFP process
 - a. 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 (e.g., identifying thermal line impacts, voltage impacts, and any obvious "fatal flaws").

HAWAIIAN ELECTRIC COMPANY, INC.

RULE NO. 19 - Continued

Interconnection and Transmission Upgrades

- b. 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 identified in Section B.4.a. of this Tariff and on unitized cost estimates (e.g., \$/mile for 138kV line, \$/transformer).
 - c. Results of the high level evaluation and high level estimate of the costs of Interconnection Facilities and required System Upgrades will be factored into the determination of which bids make the short list based on the requirements specified in the RFP.
 - d. Basic curtailment analysis of the proposed Generating Facility and related impacts to operations of existing Generating Facilities may also be factored into the determination of which bids make the short list based on the requirements specified in the RFP.
5. Full Interconnection Requirements Study - performed only on short list bids.
- a. An IRS shall 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.
 - b. An IRS would be performed either serially starting with the bid evaluated as the most competitive at the point of the evaluation process, then proceeding to the next most competitive bid on the short list or in parallel on all or some of the short list bidders simultaneously. The determination of whether or not IRS work is to be performed serially, in parallel, or a combination of the two will be based upon factors such as resource availability, number of short list bids, RFP schedule, and relative competitiveness of one bid to others, and the availability of all information and data from bidders necessary to perform the IRS work
 - c. 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.
 - d. The results of the IRS, including identified Interconnection Facilities, System Upgrades, Point of Interconnection, and Grid Connection Point, will be provided to the bidder.
 - e. Bidders shall be responsible for incorporating the costs of their Interconnection Facilities into their bids. The RFP may provide bidders with an opportunity to revise their pricing proposals under certain circumstances. Any pricing change, if permitted under the terms of the RFP, will prompt a re-evaluation of short list bidders in the selection of the winning bid as provided for in the RFP.

HAWAIIAN ELECTRIC COMPANY, INC.

RULE NO. 19 - Continued

Interconnection and Transmission Upgrades

- f. The Company may perform the analyses included in the IRS, or the IRS or parts of the IRS may be contracted to an outside consultant specializing in such analyses for complex situations or in situations where the Company does not have available resources to conduct the analyses in a time frame agreeable to the Company.
- g. The scope and cost of the IRS will depend on the complexity of the Company's System and Generating Facility that must be modeled, and the degree to which the Generating Facility will affect the Company's System.
- h. The bidder will be responsible for the cost of the IRS (or such lesser amount as the Company may specify to facilitate the processing of interconnection requests for similarly situated facilities) to be performed in order to evaluate the impacts of the Generating Facility's interconnection to the Company's System.

C. INTERCONNECTION COST AND SYSTEM UPGRADE COST ALLOCATION FOR COMPETITIVE BIDDING

- 1. The bidder shall be responsible for the cost of Interconnection Facilities and shall be responsible for the installation and maintenance of Interconnection Facilities from the Generating Facility to the Point of Interconnection, unless otherwise specified in the RFP.
- 2. Interconnection Facilities from the Generating Facility to the Point of Interconnection shall be built by the bidder, unless the Company agrees otherwise.
- 3. Interconnection Facilities from the Point of Interconnection to the Grid Connection Point shall be built by the Company and paid for by the bidder, unless the Company agrees or determines otherwise. The Company may elect to include Betterments to Interconnection Facilities from the Point of Interconnection to the Grid Connection Point, and such Betterments shall be paid for by the Company. The cost of Betterments to such Interconnection Facilities will not be considered in the bid evaluations. The bidder shall acquire the necessary land and easements for Interconnection Facilities from the Point of Interconnection to the Grid Connection Point, unless the Company agrees otherwise. Interconnection Facilities from the Point of Interconnection to the Grid Connection Point, if built by the bidder, shall be transferred to the Company upon completion, along with the necessary land rights and easements.

HAWAIIAN ELECTRIC COMPANY, INC.

RULE NO. 19 - Continued

Interconnection and Transmission Upgrades

4. The Company shall install and maintain the identified System Upgrades arising from the interconnection of the Generating Facility and shall be responsible for the cost of such System Upgrades.
 - a. The Company's cost for System Upgrades will be considered as a factor in the bid evaluations.
 - b. The degree to which the System Upgrades provide System Benefits and/or Betterments will be considered in the bid evaluations.

5. Standards and Interconnection Agreements
 - a. Interconnection Facilities and System Upgrades owned or to be owned by the Company shall be constructed in accordance with the Company's applicable standards and in accordance with the PPA or the Interconnection Agreement, if there is a separate Interconnection Agreement.
 - b. Generating Facilities and Interconnection Facilities owned by the bidder shall be constructed in accordance with applicable State and County code requirements and in accordance with the PPA or the Interconnection Agreement, if there is a separate Interconnection Agreement.
 - c. The bidder's Generating Facility may be interconnected and operated in parallel with the Company's System in accordance with the terms and conditions of the PPA between the Company and the bidder, and/or the terms and conditions of an Interconnection Agreement between the Company and the bidder, if there is a separate Interconnection Agreement.
 - d. The bidder will be required to furnish, install, operate, and maintain suitable and sufficient equipment, to maintain adequate records, and to follow such operating procedures, as may be specified by the Company to protect the Company's System from damage resulting from the parallel operation of the Seller's Facility, including the equipment, records and operating procedures more fully described in the PPA and/or Interconnection Agreement, if there is a separate Interconnection Agreement.
 - e. Interconnection Facilities shall be designed, installed operated and maintained in accordance with good interconnection practice. The objectives of good interconnection practice include, but are not limited to,
 1. Safety - To protect the safety of utility personnel, utility customers, and the public.

HAWAIIAN ELECTRIC COMPANY, INC.

RULE NO. 19 - Continued

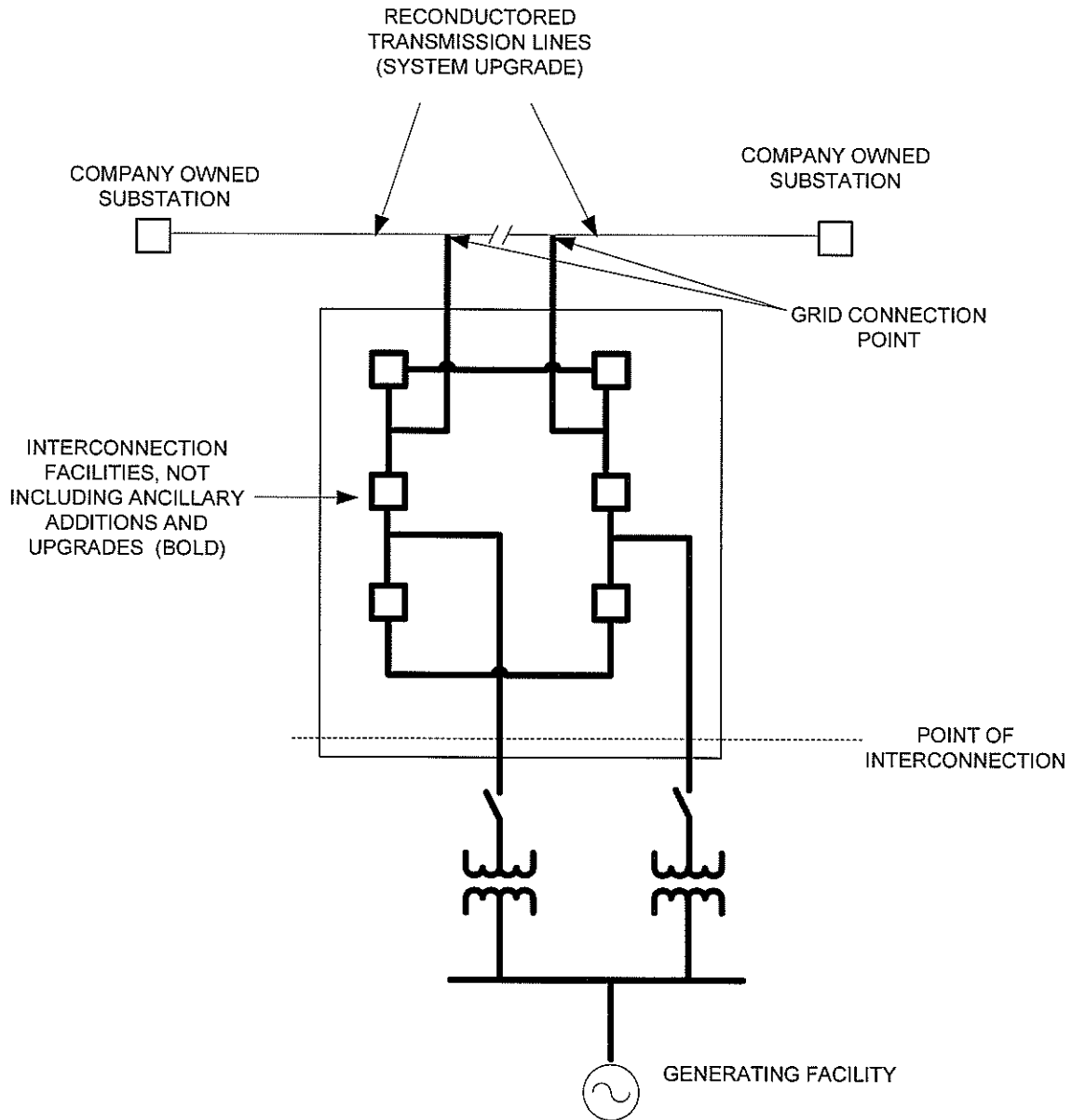
Interconnection and Transmission Upgrades

2. Reliability - To maintain the reliability of the utility system for all utility customers.
 3. Power Quality - To provide for acceptable power quality and voltage regulation on the utility system and for all utility customers.
 4. Restoration - To facilitate restoration of power on the utility system.
 5. Protect Utility and Customer Equipment - To protect utility and customer equipment during steady state and faulted system operating conditions.
 6. Protect Generating Facilities - To protect generating facilities from operation of utility protective and voltage regulation equipment.
 7. Utility System Overcurrent Devices - To maintain proper operation of the utility system's overcurrent protection equipment.
 8. Utility System Operating Efficiency - To ensure operation at appropriate power factors and minimize system losses.
- f. The bidder shall obtain, at its expense, any and all authorizations, approvals, permits, and licenses required for the construction and operation of its Generating Facility and the interconnection of its Generating Facility with the Company's System, including but not limited to environmental permits, building permits, rights of way, or easements.
 - g. Where any Company-owned Interconnection Facilities are to be located on the site of the bidder's Generating Facility, the bidder shall provide, at no expense to the Company, a location and access acceptable to the Company for all such facilities.
6. Renewable Energy Facilities
- a. In its IRP process, the Company may propose System Upgrades, to be paid for, owned and maintained by the utility, to encourage the development of Renewable Energy Facilities.
 - b. In its IRP process, the Company may propose to pay for Interconnection Facilities between the Point of Interconnection and the Grid Connection Point, in order to encourage the development of Renewable Energy Facilities.

HAWAIIAN ELECTRIC COMPANY, INC.

RULE NO. 19 - Continued
Interconnection and Transmission Upgrades

Attachment A



HAWAIIAN ELECTRIC COMPANY, INC.

DRAFT REQUEST FOR PROPOSALS
FOR
VARIABLE RENEWABLE DISPATCHABLE GENERATION
ISLAND OF O‘AHU

OCTOBER 23, 2017

Docket No. 2017-0352

Appendix K – (Reserved)



**Hawaiian
Electric**

DRAFT REQUEST FOR PROPOSALS
FOR
VARIABLE RENEWABLE DISPATCHABLE GENERATION
ISLAND OF O‘AHU

OCTOBER 23, 2017

Docket No. 2017-0352

Appendix L – Selection Criteria



**Hawaiian
Electric**

**APPENDIX L
SELECTION CRITERIA
VARIABLE RENEWABLE DISPATCHABLE GENERATION
ISLAND OF O‘AHU**

1. Non-Price Related Criteria

Proposals will be evaluated using the following non-price criteria to assess their merit in the general areas of project development feasibility and operational viability:

Community Outreach and Engagement – Gaining community support is an important part of a project’s viability and success and alignment with Hawaiian Electric’s strategic values. Proposals will be evaluated on their plan to inform the neighboring community of the project, incorporate changes based on community input, and any community outreach and engagement efforts that have been performed to date. At a minimum, proposals should include a detailed community outreach plan that describes the proposer’s intentions to work with the neighboring community to provide project information during project development and construction and to address any local and community issues that may arise. Additional preference will be given to proposers who have already established contacts to work with the local community and have proposed a community benefits package. Also preference will be given to developers and/or their selected community consultant that have successfully worked with one or more Hawaii communities for project development (energy or projects with similar community issues). This criteria is aligned with the Companies new community engagement process whereby all developers will be required to engage in community outreach prior to signing a PPA with the Companies. This process is also outlined in the RFP document.

Cultural Resource Impacts – Projects should be mindful of their potential impact to cultural resources. Hawaii law requires parties to identify (1) valued cultural, historical, or natural resources in the area in question, including the extent to which traditional and customary native Hawaiian rights are exercised in the area; (2) the extent to which those resources -- including traditional and customary native Hawaiian rights -- will be affected or impaired by the proposed action; and (3) the feasible action, if any, to be taken to reasonably protect native Hawaiian rights if they are found to exist. Proposals will be evaluated on their plan to assess and mitigate their impact to cultural resources and any assessments that have been conducted to date. At a minimum, proposers should have already contracted with an outside consultant to begin a cultural impact assessment for the project. Additional preference will be given to Proposals that are further along in the assessment process and are able to provide a mitigation/action plan or are able to provide a date for when a mitigation/action plan will be available that addresses any identified cultural resource issues.

Environmental Review and Permitting Plan – Completing any necessary environmental review and obtaining the required permitting in a timely manner is important to meeting construction schedules. Proposals will be evaluated on their plan to identify, apply for, and secure the required permits for the project, any permitting activity that has been completed to date, and the degree of certainty offered by the Proposer in securing the necessary permits. At a minimum, proposers should have identified all major permits and approvals required and have a preliminary plan for securing the permits. Additional preference will be given to Proposals that are able to provide a greater degree of certainty that there will

be no major environmental issues associated with the project, the plan to secure the required permits is realistic and achievable, or have already received all or a majority of the required permits.

Experience and Qualifications –Developers with a demonstrated ability to construct and interconnect projects to the Hawaiian Electric grid can reasonably be expected to be able to successfully complete a project with a higher level of confidence than those without any prior experience. Therefore, proposals will be evaluated based on the prior local experience of the Developer in connecting projects to the Hawaiian Electric grid. At a minimum, the proposer and its team should have experience with developing at least one project of a similar type to the one being proposed. Additional preference will be given to proposers with experience in successfully developing, financing constructing, and operating multiple projects that are similar to the one being proposed.

Financial Strength and Financing Plan – This criterion addresses the comprehensiveness and reasonableness of the financial plan for the project as well as assesses the financial strength and capability of the proposer to develop the project. A complete financial plan addresses the following issues: project ownership, capital cost and capital structure, sources of debt and equity, and evidence that the project is financeable. The financial strength of proposers or their credit support providers will be considered, including their credit ratings. At a minimum, the Proposal should include a basic financial plan for the project covering the sources of debt and equity, capital structure, etc. and provide evidence of general support for the project financing. The financing participants are expected to be reasonably strong financially. Additional preference will be given to financial plans that are more comprehensive and also achievable, provide stronger evidence (letter from a financial institution or bank) that the project is financeable, and that can demonstrate that the proposer has the capability and financial strength to develop and finance the project. Developers and their sources of capital that have investment grade credit ratings from a reputable credit rating agency (S&P, Moody's, Fitch) will also be given preference, with those that have higher credit ratings ranked higher.

State of Project Development and Schedule – Projects that are further along in development generally have lower project execution risk and a greater probability of being able to be successfully placed into service prior to the Threshold December 31, 2022 date and are more likely to be able to pass along tax credit savings to customers. At a minimum, projects should be able to demonstrate that there is a reasonable chance that the project will be able to meet the 2019 investment tax credit safe harbor. Additional preference will be given to proposals that are able to demonstrate via a detailed critical path schedule, including identifying adequate slack time, that there is a high likelihood that the project will be able to meet the 2019 investment tax credit with an early commercial operations date.

Site Control – This criterion relates to the status of site ownership and control by the project sponsor as well as the maturity of site control. In addition, the zoning of the site and the status of easements are considered. At a minimum, the proposer should have executed a letter of intent for the site and have a reasonable plan for addressing zoning, rights of ways, and easements. Additional preference will be given to proposers who own the site or have executed an agreement or option to purchase or lease the site, if the site is already properly zoned, or has obtained or has letters of intent to obtain any required rights of ways and easements. It is anticipated and acceptable that there may be non-exclusive agreements or options for a particular site which would be contingent upon selection of projects.

Environmental Compliance / Impacts – This criterion relates to the potential environmental impacts associated with each project, the quality of the plan offered by the proposer to mitigate and manage any environmental impacts (including any pre-existing environmental conditions), and the plan of bidders to remain in environmental compliance over the term of the contract. These impacts are reflected on a technology specific basis. At a minimum proposed projects should be expected to have a minimal impact for most environmental areas and proposals should provide a preliminary plan to mitigate the identified impacts to remain in environmental compliance which should not significantly affect the project timeline. Additional preference will be given to proposals that provide a more detailed plan as well as those that have already proactively taken steps to mitigate environmental impacts.

O&M Plan – Operations and maintenance is an important aspect of project operations. This is especially important in the context of the new Renewable Dispatchable Model PPA structure, which relies on the continued performance of the Facility in exchange for fixed monthly payments. Proposals will be evaluated on their plan for operating and maintaining the Facility throughout the contract term including the status of any agreements with an O&M provider, the reasonableness of the O&M funding levels and mechanism, staffing levels, as well as any design plans that identify and incorporate features to ensure appropriate reliability is built into the project. At a minimum, proposals should include a reasonable O&M plan that identifies expected funding and staffing levels. Additional preference will be given to proposals that provide a more comprehensive plan or those that have identified a potential O&M provider or have already executed a minimum letter of intent with a reputable O&M provider.

Model PPA Contract Exceptions – Proposers are encouraged to accept the contract terms identified in the Model PPA. Any proposed changes (to those items identified as negotiable in the Model PPA) should be accompanied by supporting rationale and Hawaiian Electric reserves the right to reject any proposed change based on its evaluation. Proposals will be evaluated based on the number and complexity of contract exceptions proposed due to the constrained timeline to meet ITC deadlines. Thus, proposals having fewer proposed changes will be rated more favorably. At a minimum, proposers should not propose major, substantive revisions to the contract and should generally be willing to work with HECO to revise the contract terms.

2. Detailed Evaluation

The objective of the detailed evaluation is to select the Proposal(s) which provide the greatest value consistent with Hawaiian Electric's objectives and requirements as set forth in this RFP. The preferred Proposal(s) do not necessarily have to be the lowest cost option(s) or have the most favorable non-price factor evaluation. Hawaiian Electric prefers viable Projects which provide a low-cost with limited risk and that provide resource diversity, operational reliability, operational flexibility, and the ability to meet system operational requirements.

Hawaiian Electric will evaluate Proposals by assessing the proposed cost of the delivered energy and operating characteristics of the proposed Project. The evaluation will be based on the total net cost to Hawaiian Electric of integrating a Proposer's proposed Project onto the Hawaiian Electric System which includes:

1. The cost to dispatch the Project and energy purchased.

2. The fuel cost savings and any other direct savings resulting from the displacement of generation by the proposed Project.
3. The estimated increase in operating cost, if any, incurred by Hawaiian Electric to maintain system reliability.
4. Any required transmission system or distribution system upgrade costs that are required to interconnect the Proposed project to the system that are not included in the Proposal price
5. The cost of reduced efficiency in operating the system as a result of accepting the Proposer's electric energy onto the system.
6. The cost of imputed debt, if applicable.

For conducting this analysis, Hawaiian Electric will replace units in a reference resource plan with the proposed resource and re-run its resource plan with the specific Proposal.

During the detailed evaluation process, Hawaiian Electric may elect to have face to face meetings with Proposers to better assess the Proposals and the status of the proposed Project(s). The detailed evaluation will also include a risk assessment of the Proposals to assess, in more detail, the viability of each Proposal as well as a sensitivity analysis of key factors including Project economics, if applicable.