



Hawaiian Electric Co., Inc.

Nonutility Generator (NUG) Proposal Summary

Fill out this form completely, using separate copies to describe each proposed project. Use separate sheets as necessary to provide the required information, referencing the numbered sections on this form. Indicate N/A if not applicable. Form should be returned to:

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Proposal applicable to (check one):

- Hawaiian Electric Company, Inc. (HECO)
- Hawaii Electric Light Company, Inc. (HELCO)
- Maui Electric Company, Ltd. (MECO)

Date of Proposal _____

Section I General Information

(Note: Throughout this form, "net" refers to "net TO THE UTILITY," unless otherwise indicated.)

I.1 Project Name

I.2 Technology to be Employed

I.3 Energy Source (please also state if this is a renewable resource)

I.4 Specific Site (for determining transmission requirements and avoided costs). Attach documents to support site acquisition.

I.5 Is a single-line diagram available?

Yes (Please attach.) No

I.6 Unit Capability

	Net (MW) (to utility system)	Corresponding Gross (MW)
Minimum (normal operations)	_____	_____
Minimum + [25% x (Normal Top Load - Minimum)] (normal operations)	_____	_____
Minimum + [50% x (Normal Top Load - Minimum)] (normal operations)	_____	_____
Minimum + [75% x (Normal Top Load - Minimum)] (normal operations)	_____	_____
Normal Top Load (normal operations)	_____	_____
Emergency	_____	_____

Duration of Emergency Capability (e.g., 10% above Normal Top Load capability for 2 hours only in a 24-hour period)

I.7 Project Type (check one):

Firm Capacity
 As-Available Energy

(If firm capacity, then the avoided cost calculation will be based on long-term forecasts of energy. If as-available energy, then the avoided cost will generally be based on the short-term avoided energy and Schedule Q filing.)

I.8 Electrical Generators:

a. Number of Generators Employed and Size (MW).

b. Type of Generators (check one):

Synchronous
 Induction
 Other (specify) _____

I.9 In-Service Date(s) (month & year). Attach a detailed schedule to support the in-service date.

I.10 Estimated Plant Service Life _____ Years

I.11 Power Purchase Agreement Duration _____ Years

(As a normal practice, Power Purchase Agreement Duration should not exceed the Estimated Plant Service Life.)

I.12 Proposed Interconnection Point (check one):

Transmission (HECO system: 138 kV; HELCO/Maui systems: 69 kV)
 Subtransmission (HECO system: 46 kV; HELCO system: 34.5 kV; Maui system: 23 kV)
 Distribution (Note: Distribution voltages vary depending on the location of the facility, e.g., 25 kV, 12 kV, 4 kV)

I.13 Describe interconnection point, metering location, required modifications to HECO/HELCO/MECO system to integrate proposed NUG project

I.14 Is the proposed plant a Qualifying Facility under PURPA? (check one)

Qualifying Facility (attach evidence of QF certification)
 Nonqualifying Facility
 Exempt Wholesale Generator (EWG)

I.15 Name of Contact _____

telephone: _____ fax: _____ e-mail: _____

I.16 Conflict of Interest - list all principal parties and contractors and state any conflicts of interest they may have between this proposed project and any other alternative projects, either with a competitor or HECO/HELCO/MECO. If there are no conflicts of interest, so indicate.

Section II Operational Information

II.1 Full dispatchability (Unit must load follow between Normal Top Load and Minimum capabilities)?

Yes No

(For firm capacity, we require full dispatchability.)

Describe any operating or dispatch constraint and the source of the constraint (e.g., equipment limitations, environmental permits, fuel resource availability, or other sources).

Operating or Dispatch Constraints:

Source of Constraints:

II.2 Cycling capability (Complete shutdown or turn down to 0 MW net to system) on a daily basis?
_____ Yes _____ No

(For firm capacity, we require cycling capability. See each utility's most recent Electric Utility System Cost Data filing for minimum load constraints.)

Describe any operating or cycling constraint and the source of the constraint (e.g., equipment limitations, environmental permits, or other sources).

Operating or Cycling Constraints:

Source of Constraints:

II.3 Auxiliary Power Requirements for:
Start-up* _____
Normal Operations (from generator) _____
Normal Operating shutdown* _____
Forced Emergency shutdown* _____
Maintenance Outage* _____
* net from HECO/HELCO/MECO system

II.4 Expected Equivalent Availability Factor (NERC Definition)
(annual equivalent hours available/8760) _____ %

II.5 Equivalent Forced Outage Rate (NERC Definition)
$$\frac{\text{(forced out hours + equivalent forced derated hours)}}{\text{(forced out hrs + svc hrs + equiv. forced derated hrs during reserve shutdown)}} \times 100$$

_____ %

II.6 Ramp rate Net (MW/minute) Gross (MW/minute)
Ramp Rate _____ _____

II.7 Expected Performance for:

Undervoltage ride-through – Indicate the facility's terminal voltage level(s) and elapsed time at which the facility will disconnect from the utility system, if any. [HELCO's preference is to have relaying be set for "alarm only".]

Underfrequency operation – Indicate the system frequency or frequencies at which the facility will disconnect from the utility system, if any. [HELCO's preference is to have relaying be set for "alarm only".]

Overvoltage ride-through – Indicate the facility's terminal voltage level(s) and elapsed time at which the facility will disconnect from the utility system, if any. [HELCO's preference is to have relaying be set for "alarm only".]

Overfrequency operation – Indicate the system frequency or frequencies at which the facility will disconnect from the utility system, if any. [HELCO's preference is to have relaying be set for "alarm only".]

II.8 Quick Load Pick-Up (QLPU) (for HECO & HELCO only) -- the amount of additional load that the unit could pick up in 3 seconds in response to a system frequency decrease when the unit is not at full load. (MECO currently has no QLPU criteria.)

	Net MW	Net QLPU Available MW	Corresponding Gross QLPU Available MW
Minimum Net Capability	_____	_____	_____
Min Net Cap+25% x (Normal Top Load Net Cap - Min Net Cap)	_____	_____	_____
Min Net Cap+50% x (Normal Top Load Net Cap - Min Net Cap)	_____	_____	_____
Min Net Cap+75% x (Normal Top Load Net Cap - Min Net Cap)	_____	_____	_____

II.9 Maintenance Outage Requirements - Specify partial and complete outage requirements in weeks for the number of years required for the cycle to repeat (For example, list time interval of minor and major overhauls, and the duration of overhauls)

II.10 Cold start heat input requirement in MBtu _____

II.11 Hot start heat input requirement in MBtu _____

II.12 Number of hours the unit stays hot after shutdown _____

II.13 Specify all other operating constraints

Section III Contract Terms

III.1 Capacity Charge (applicable to Firm Capacity projects only)

Generation Capital (normally levelized)	_____	(\$/kW-yr, net)		
Fixed Operations & Maintenance	_____	(\$/kW-yr, net)	(in calendar year	_____ dollars)
Other (specify) _____	_____	(\$/kW-yr, net)	(in calendar year	_____ dollars)
Total Capacity Charge	_____	(\$/kW-yr, net)	(in calendar year	_____ dollars)

III.2 Energy Charge

Fuel. State in the form of:
Heat rate in MBtu/MWh = A/L + B + CL,
where A, B, and C are constants and L is the load in MW.

Fuel	_____	\$/MBtu (in calendar year	_____	dollars)
Variable Operations & Maintenance	_____	(¢/kWh) (in calendar year	_____	cents)
Other (specify) _____	_____	(¢/kWh) (in calendar year	_____	cents)

III.3 Escalation terms (specifically state what indices to use for escalation, if any)

Fixed Operations & Maintenance _____

Fuel _____

(As a normal practice, the Fuel charge is escalated using actual fossil fuel prices for fossil fuel technologies.)

Variable Operations & Maintenance _____

Other _____

III.4 Reliability terms or adjustments (if any) (Provide details on terms or adjustments)

III.5 Options, such as black start, future fuel conversions, etc. and their pricing

III.6 Payment Terms (describe when invoices will be rendered, when payments are due, period of time covered by invoice, and any other special terms regarding payments)

III.7 Any other charge items from NUG to HECO/HELCO/MECO

III.8 Specify all other special needs and/or provisions

(Use separate sheets as necessary)



Hawaiian Electric Co., Inc.

Nonutility Generator (NUG) Supplemental Proposal Information

Indicate N/A if not applicable.

1. Background on Proposer

- 1a. Provide proposer's legal name, address, structure (e.g., sole ownership, corporation, joint venture, partnership, LLC, LLP, etc.), nature of business and description, number of years in business, number of permanent employees, federal tax identification number, legal names of parent company and/or subsidiaries, organizational structure of each entity, and state or country in which each entity was formed or incorporated. If proposer is a corporation or partnership, provide proof of business registration (from the Business Registration Division of the Department of Commerce and Consumer Affairs, State of Hawaii) if registered to do business in Hawaii.

- 1b. Provide name, title, and background of officers, owners, or partners of each entity (including members of Board of Directors, persons or entities holding a 10% or greater ownership interest, general partner of a limited partnership, etc.).

- 1c. Provide proposer's trade name (if different from legal name). Is trade name federally registered? Is trade name registered in any state(s)?; if yes, where?

- 1d. Does proposer have an office in Hawaii? If yes, please provide address.

- 1e. Provide street and mailing (if different from street) addresses of proposer's corporate office.

- 1f. Provide articles of incorporation, bylaws, shareholder agreements, operating agreements and other information that describes proposer's business practices.

- 1g. Provide name, title and background of project team (including those responsible for design, construction, permitting, operations and maintenance).

1h. Provide information on the organizational structure of the project team and include any agreements, financial sheets, or other relevant information.

1i. Please identify all known or anticipated sources of capital for proposer's project.

1j. Provide a listing of other projects (project name, location, capacity, fuel, status, output purchaser, and whether there is utility interconnection) installed, owned or developed by project team. If the projects were not installed, owned or developed solely by the project team, identify all other responsible parties or affiliates and their respective interests and roles in the projects.

1k. Provide a listing of other projects (project name, location, capacity, fuel, status, output purchaser, and whether there is utility interconnection) operated by project team. If the projects were not operated solely by the project team, identify all other responsible parties or affiliates and their respective interests and roles in the projects.

1l. For all financed projects installed, owned, developed, or operated by project team, identify underwriters, advisors, debt sources, etc.

1m. Provide contact information of references (name, company, telephone number, e-mail address) for each project listed in 1j and 1k.

1n. Provide current financial statements of all entities involved in the project team. This shall include items such as audited financial statements not over twelve (12) months old, debt ratings, annual reports, FERC Form 1, credit reports (issued not more than three (3) months ago from a credit reporting agency) and any other applicable financial information. If none of the above is available, provide verifiable financial statements for the past three (3) years if available, and Dun and Bradstreet identification number where available.

1o. Has proposer ever been disqualified from doing business in any state or country? If yes, where?.

1p. Has proposer or its parent, or any subsidiaries, affiliates, principals, majority owners, or predecessors ever filed bankruptcy, or had a petition for involuntary bankruptcy filed against it within the last ten (10) years? If yes, please attach explanation.

1q. Describe any and all completed, pending and potential litigation and regulatory proceedings that could affect the viability of the proposer's proposal or the proposer's financial stability, including without limitation any civil and criminal proceedings involving any principals of the proposer.

2. Permits and Approvals

2a. List all major permits required, including environmental assessments or environmental impact statements.

2b. Describe land and use rights for proposed project, such as location, ownership, current zoning, size, and cost of project site.

2c. Provide status and copies of any agreements for any necessary land lease and easements, air and water permits, rights of way, and the like.

2d. Describe and provide all licenses received or description of plans to obtain licenses

2e. Describe and provide all approvals required for completion of the project.

2f. Describe projected emissions and waste streams, environmental impacts, including any studies or reports regarding the environmental impacts.

2g. Describe level of community support and provide the communications plan to gain public support for the proposed project.

3. Project Flexibility and Viability

3a. Describe ability to expand at the proposed site.

3b. Provide location of known substation and transmission and distribution lines near the project location.

3c. Identify provisions offered by the proposer for providing liquidated damages and payment for replacement power in the event of failure-to-perform by the proposer for proposals containing firm power deliveries.

3d. Describe permitting, regulatory, utility rules, and other issues which may delay or impede project completion or long-term operation.

3e. Provide project schedule with key milestones (include permitting, land lease, major equipment purchase, etc).

3f. Provide description of operation and maintenance (O&M) plan.

4. Project Financing

4a. Provide project *pro forma* (e.g., income statement, balance sheet and cash flow which show cost items and schedule for major equipment, electrical interconnection, and other costs).

4b. Describe the assumptions used to formulate the *pro forma* and pricing proposal (e.g., escalation factors, tax credits, tax rates, etc.).

4c. Provide proposed permanent financing approach (i.e., recourse debt, non recourse debt, common equity, preferred equity, etc.) and the extent to which financing will be provided by affiliated persons or entities.

4d. Provide proposed financing approach and schedule for project development, major equipment purchase, and construction phases, if different than the permanent financing and the extent to which financing will be provided by affiliated persons or entities.