BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF HAWAII

In the Matter of the Application of)
)
HAWAII ELECTRIC LIGHT COMPANY, INC. 
)
)
For Approval of a Power Purchase )
Contract with Hawi Renewable 
Development, LLC, and Approval to 
Commit Funds in Excess of $500,000 
for HELCO-Owned Interconnection 
Facilities.
)

DECISION AND ORDER NO. 20979

Filed  May 14, 2004
At 10:00 o’clock A.M.

Karen Higashi
Chief Clerk of the Commission

ATTEST: A True Copy
KAREN HIGASHI
Chief Clerk, Public Utilities Commission State of Hawaii.
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BEFORE THE PUBLIC UTILITIES COMMISSION

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HAWAII ELECTRIC LIGHT COMPANY, INC.) Docket No. 04-0016

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DECISION AND ORDER

I.

Background

The commission previously approved a Power Purchase
Contract, dated January 8, 2001, as amended, between HAWAII
ELECTRIC LIGHT COMPANY, INC. ("HELCO") and Hawi Renewable
Development, Inc. ("HRDI"), known as the Group A Contract.\(^1\) The
commission also approved other matters related to the Group A
Contract, including HELCO's request to commit funds to construct
the facilities needed to interconnect HELCO's system with HRDI's
wind farm. HRDI has completed the preliminary engineering work,
and is in the process of finalizing contracts for the wind
turbine generators and remaining plant balance, including
electrical infrastructure, for the Group A wind turbines.

\(^1\)See Decision and Order No. 19953, filed on January 14,
2003, in Docket No. 02-0145.
HRDI initially planned to construct, own, and operate a 5.28 megawatt ("MW") wind farm at Upolu Point Road, Hawi, island of Hawaii, utilizing eight (8) 660 kilowatt ("kW") Vestas Wind Systems A/S Model V47 ("Model V47") wind turbines, in accordance with the Group A Contract. Now, however, HRDI, through Hawi Renewable Development, LLC ("HRD"), plans to expand its wind farm to 10.56 MWs, at the same site, utilizing sixteen (16) Model V47 wind turbines.  

HRD's expansion plans has resulted in a new Power Purchase Contract for As-Available Energy, dated December 30, 2003, between HELCO and HRD, known as the Group B Contract or PPA.

HELCO requests commission action approving: (1) the PPA; (2) the expenditure of approximately $1,244,000 to construct the facilities needed to interconnect HELCO's system with HRD's wind farm; and (3) other matters related to the PPA. HELCO makes its requests in accordance with Section 2.3.g.2 of General Order No. 7, Standards for Electric Utility Service in the State of Hawaii, and Hawaii Administrative Rules ("HAR") § 6-60-6(2).

HELCO explains that the expansion of HRD's wind farm is due, in part, to the termination of a Power Purchase Contract for As-Available Energy, dated April 17, 1999, as amended, between HELCO and Kahua Power Partners LLC (the "KPP PPA"), for the construction and operation of a ten (10) MW wind farm at Kahua Ranch, Kohala, island of Hawaii. The commission approved the KPP PPA, by Decision and Order No. 18576, filed on June 1, 2001, in Docket No. 00-0177.

Kahua Power Partners LLC subsequently assigned the KPP PPA to HRDI, with HELCO's consent. HRDI then decided to: (1) expand its Hawi wind farm, of which the Group A Contract will consist of the first phase; and (2) terminate the KPP PPA.

HELCO's application, filed on January 20, 2004. HRD's share of the $1,244,000 is approximately $929,000.
HELCO served copies of its application upon the Department of Commerce and Consumer Affairs, Division of Consumer Advocacy ("Consumer Advocate"). On April 1, 2004, HELCO responded to the Consumer Advocate's information requests.

The Consumer Advocate does not object to the commission's approval of HELCO's application.4

HELCO and the Consumer Advocate (collectively, the "Parties") informs the commission that HELCO's application is ready for decision-making, in accordance with Stipulated Procedural Order No. 20850, filed on March 16, 2004.5 Hence, the twenty (20)-day deadline governing commission action on HELCO's application is May 17, 2004.6

4Consumer Advocate's position statement, filed on April 22, 2004.

5The Parties agreed to extend the ninety (90)-day deadline governing commission action on the capital expenditure portion of HELCO's application, "until 20 days after HELCO provides notice that the proceeding is ready for decision-making[.]". Stipulated Procedural Order No. 20850, at 3 - 4. On April 27, 2004, HELCO, with the Consumer Advocate's concurrence, informed the commission that HELCO's application is ready for decision-making. See HELCO's letter, dated April 27, 2004.

6See id. Meanwhile, if the commission does not approve the PPA within twelve (12) months from the date HELCO submitted its application to the commission (i.e., by January 20, 2005), either HELCO or HRD may declare the PPA "null and void[.]". See PPA, Section 10(c).

The commission finds that, in order to address the merits of HELCO's request to commit approximately $1,244,000 to construct the necessary facilities to interconnect with HRD's wind farm, the commission must first address the merits of the PPA. In other words, if the PPA is unreasonable and rejected, the capital expenditure issue is rendered moot. The commission, thus, addresses all of the issues in this decision and order.
This decision and order addresses the issues raised by HELCO in its application, in toto.  

II. HELCO and HRD

HELCO is a public utility engaged in the production, purchase, transmission, distribution, and sale of electricity on the island of Hawaii.

HRD is a Delaware limited liability company registered to do business in the State of Hawaii (the "State"). HRD's members are: (1) HRDI, the seller under the Group A Contract, fifty-one (51) per cent interest; (2) International Energy Services USA, Inc., the developer, owner, and operator of small hydro and wind projects in California, 24.5 per cent interest; and (3) enXco, Inc., a full service wind development company "that owns over 800 MW of wind projects, provides operation and maintenance on over 4,000 wind turbines, and has developed and constructed 100 to 200 MW of new projects annually in the United States[,"] 24.5 per cent interest.

HRD intends to operate its small power production facility as a non-fossil producer, pursuant to Hawaii Revised Statutes ("HRS") § 269-27.2. HRD must designate its facility as a "qualifying facility," no later than the initial in-service

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7See also Stipulated Procedural Order No. 20850, Section I, Statement of the Issues, at 2.

8HELCO's application, at 10.
date of the PPA. HRD plans to construct its wind farm using its internal funds; no external financing is contemplated at this time.

The Consumer Advocate states that HRD meets the requirements of a "qualifying facility," pursuant to HAR §§ 6-74-4, 6-74-5, and 6-74-7. Specifically:

1. HRD's wind farm is planned for 10.56 MWs, within the maximum size criteria of eighty (80) MWs or less;
2. HRD's primary energy source is wind; and
3. Less than fifty (50) per cent of HRD's ownership interest is held by other entities and just 24.5 per cent is held by an entity that is affiliated with an electric utility company.

III.

HELCO's Requests

HELCO states that the PPA, negotiated at arms-length with HRD, is reasonable. It requests that the commission:

1. Approve the PPA;
2. Find that the energy charges to be paid by HELCO pursuant to the PPA are reasonable;

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A small power production facility's designation as a "qualifying facility" is governed by Federal law. See 16 United States Code § 824a-3, the Public Utility Regulatory Policies Act of 1978, as amended, commonly known as PURPA; and 18 Code of Federal Regulations § 292, the Federal Energy Regulatory Commission's regulations governing qualifying cogeneration and small power production facilities. See also HAR chapter 6-74, subchapter 2.
3. Find that the purchased power arrangements under the PPA, pursuant to which HELCO purchases energy from HRD, are prudent and in the public interest;

4. Authorize HELCO to include the purchased energy costs (and related revenue taxes) that HELCO incurs under the PPA, in HELCO's energy cost adjustment clause (the "ECAC"); and

5. Approve the commitment of approximately $1,244,000 to construct the facilities needed to interconnect HELCO's system with HRD's wind farm.

IV.

The PPA

Upon the commission's approval of the PPA, the Group B Contract will supersede and terminate the Group A Contract. HRD is required to operate its wind farm and offer energy to HELCO within twenty-four (24) months of the "Group B Non-appealable PUC Approval Order Date."10

HRD is responsible for the design of its wind farm. HELCO has the right to review and comment on the design.

HRD's wind farm will consist of two (2) groups: (1) Group A, comprising up to eight (8) Model V47 wind turbine generators; and (2) Group B, comprising up to sixteen (16) Model V47 wind turbine generators, less the number of generators in Group A. The total number of wind turbine generators in Groups A and B, combined, will not exceed sixteen (16).

10Appendix F of the PPA defines the "Group B Non-appealable PUC Approval Order Date" as "[t]he date that the Group B PUC Approval Order becomes a Non-appealable PUC Approval Order."
HRD will provide energy to HELCO on an unscheduled basis, as HRD determines that energy is available from its wind farm. The total allowed capacity may not exceed 10,560 kW. HRD's sale of energy to any third-party is prohibited.

HRD's on-peak and off-peak energy prices will be one-hundred (100) per cent of HELCO's on-peak and off-peak avoided energy cost payment rates applicable at the time the energy is delivered, as shown by HELCO's avoided energy cost data filed quarterly with the commission, pursuant to HAR § 6-74-17(b). The PPA does not provide for minimum purchase rates.

HELCO is not obligated to accept or pay for any energy delivered by HRD prior to either the: (1) "Group B Non-appealable PUC Approval Order Date"; or (2) completion of the HELCO-owned interconnection facilities.

HELCO has the right to temporarily curtail, interrupt, or reduce the delivery of energy from HRD whenever necessary for operational, emergency, or safety reasons. HELCO is not obligated to pay for any energy except for energy that HELCO is able to take during this period, upon HELCO's notification. HELCO is required to take all reasonable steps to minimize the number and duration of curtailments, interruptions, and reductions. In addition, each party has the right to disconnect from the other party for operational or safety reasons.

HELCO is not required to purchase energy during any period where, due to operational circumstances, purchases from HRD will result in costs greater than those HELCO would incur if
it did not make those purchases but instead generated an equivalent amount of energy itself.

Performance standards are specified as ramp rates and power fluctuation rates. HRD must ensure that the ramp rates and power fluctuation rates of its wind farm are less than the limits specified in the PPA. If the ramp rate or power fluctuation rate is greater than or equal to the specified limits, HELCO has the right to curtail HRD's wind farm, or to disconnect HRD's wind farm from HELCO's system if such curtailment does not adequately resolve the problem.

Limits on voltage flicker and harmonic distortion caused by HRD's wind farm are also specified. HRD must also regulate the voltage of the energy delivered to HELCO to a voltage or a power factor specified by HELCO's system operator. HELCO may disconnect all or part of the wind farm from its system based on HRD's failure to operate in accordance with the power factor requirement.

HRD must operate its wind farm in accordance with Good Engineering and Operating Practices, aka "GEOP." HELCO has the right to inspect the wind farm and HRD's operation and maintenance of the wind farm.

HRD must maintain commercial general liability insurance coverage of a combined single limit of at least $2 million for any occurrence (bodily injury and property damage), with HELCO named as an additional insured. Cross-indemnification and hold harmless provisions are also included in the PPA.
The initial term of the PPA is fifteen (15) years, and commences when the first wind turbine generator passes the control system acceptance test. The PPA will continue in effect after the initial fifteen (15)-year period, until terminated by either Party.

The Consumer Advocate states that the PPA's terms and conditions are reasonable. Specifically:

1. The PPA's terms and conditions:
   A. Are virtually identical to the terms and conditions set forth in the Group A Contract and other power purchase agreements previously approved by the commission.\(^\text{11}\)
   B. Maintain the broad indemnification and insurance requirements set forth in the Group A Contract.
   C. Authorize either HELCO or HRD to curtail or disconnect "from the other party for justifiable reasons, such as operational and safety reasons."\(^\text{12}\)

2. HELCO and HRD are required to install, operate, and maintain their respective equipment and facilities in accordance with GEOP, applicable laws, rules, orders, and tariffs.

3. HRD's on-peak and off-peak energy prices will be one-hundred (100) per cent of HELCO's on-peak and off-peak

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\(^{11}\)Modifications to the Group A Contract, the Consumer Advocate notes, incorporate: (1) HRD's intent to expand its wind farm from 5.28 MWs to 10.56 MWs; (2) HRD's plan to phase-in the wind farm; and (3) the standard that each wind turbine generator meet the control system acceptance test.

\(^{12}\)Consumer Advocate's position statement, at 9.
avoided energy cost payment rates applicable at the time the energy is delivered. These pricing terms are consistent "with the pricing provisions for other QF-type of power purchase contracts."\textsuperscript{13}

4. The PPA does not appear to contain any provisions or terms that discriminate against other small power producers.

5. Furthermore, "to the extent not already recognized in HELCO's base rates, inclusion of the purchased energy costs incurred under the PPA in HELCO's energy cost adjustment clause for the term of the PPA appears reasonable at this time."\textsuperscript{14}

V. Interconnection Facilities

HRD will construct, operate, and maintain a switching station for its wind farm. HELCO: (1) will construct, operate, and maintain all HELCO-owned facilities needed to interconnect its system with HRD's wind farm; and (2) at its option, may allow HRD to construct some of the HELCO-owned interconnection facilities. HRD will transmit the energy from its switching station to HELCO's 69 kV transmission system using: (1) the 34.5 kV line extension; (2) HELCO's 34.5 kV Waimea-Halaula

\textsuperscript{13}Id. at 10.

\textsuperscript{14}Id. at 16.
transmission line; and (3) HELCO's Waimea transformer. HRD is required to pay for the actual costs of the HELCO-owned interconnection facilities.

HELCO states that the interconnection facilities are generally the same facilities previously approved by the commission in Decision and Order No. 19953 for the Group A Contract, "with the exception of the costs of the 34.5 kV overhead line extension."6

In Docket No. 02-0145, the commission approved the expenditure of approximately $883,000 for the HELCO-owned interconnection facilities. Now, HELCO requests approval to commit approximately $1,244,000, representing an additional $361,000, for the HELCO-owned interconnection facilities. HRD's share of the $1,244,000 is approximately $929,000. HELCO's share of approximately $315,000 represents its system betterment costs.17

The interconnection work, based on an Interconnection Requirements Study completed in November 2003 by Hawaiian Electric Company, Inc., will consist of:

15Specifically, the 34.5 kV transmission line that serves the North Kohala area terminates at the Hawi substation. In order to interconnect HRD's wind farm to HELCO's system, the 34.5 kV transmission line will be extended from a point outside the Hawi substation, to the site of HRD's wind farm. The total length of the line extension is approximately three (3) miles. See Exhibit 10 of HELCO's application; and HELCO's response to CA-IR-2.

16HELCO's application, at 45.

17See id., at footnote 6, and at 52.
1. 34.5 kV overhead transmission line and drop, including the installation of: (A) approximately three (3) miles of 34.5 kV transmission line from the Hawi substation to the interconnection point near pole 31; and (B) a 34.5 kV disconnect switch near pole 31 ($819,000, of which HRD's share is $504,000. The $315,000 balance represents HELCO's system betterment costs.);18

2. Microwave communication link, including microwave tower installation at Upolu, County of Hawaii ("COH") microwave tower upgrade, and additional equipment at the COH facility ($235,000);

3. Remote terminal unit at HRD's switching station ($40,000);

4. Site work and facilities at HRD's switching station, including the installation of control equipment and batteries and chargers ($60,000); and

5. Waimea switching station relay work, including the replacement of existing protective relays and associated controls and communications ducts from the microwave room to the switching station ($90,000).

The Consumer Advocate notes that HELCO: (1) plans to construct facilities to allow HRD to interconnect with HELCO's existing 34.5 kV transmission line; and (2) proposes to proceed with other work deemed necessary to minimize service outages to customers, i.e., system betterment work.19 The Consumer Advocate finds that:

18See Exhibit 10 of HELCO's application; and HELCO's response to CA-IR-2. HELCO's system betterment work will involve: (1) installing larger conductors on higher wood poles or steel poles along the section of the 34.5 kV transmission line extension that runs from the Hawi substation to the intersection of the Akoni Pule Highway and Upolu Point Road; and (2) increasing the capacity of the existing 4.16 kV distribution line that runs from the Hawi substation to the Mahukona area, to 12.47 kV. See HELCO's application, at 52 - 56.

19Id.
1. The construction of the proposed interconnection facilities, including the system betterment work, is "necessary to serve the public's interest."\(^{20}\)

2. "Allowing the interconnection facilities to be built will facilitate the transfer of non-fossil fuel energy from the HRD facility to HELCO's transmission system."\(^{21}\)

3. The system betterment work, "which would be required in the short to mid-term future, can be done now to mitigate outage times and to achieve . . . cost benefits[]."\(^{22}\)

4. In future rate proceedings, HELCO and the Consumer Advocate must:
   A. Ensure that HELCO's rate base fully recognizes an offset from HRD for all costs incurred by HELCO to construct or provide the HELCO-owned interconnection facilities.
   B. Determine whether the operations and maintenance costs incurred by HELCO, if any, to operate and maintain the interconnection facilities are offset by reimbursements from HRD; and
   C. "Determine whether any costs of replacement or relocation, if any, of the interconnection facilities are reimbursed by HRD."\(^{23}\)

\(^{20}\)Consumer Advocate's position statement, at 12.
\(^{21}\)Id.
\(^{22}\)Id.
\(^{23}\)Id. at 13.
The Consumer Advocate further finds that "HELCO's ratepayers are not expected to be negatively impacted by the current estimated project costs and cost sharing arrangements with HRD." Concomitantly, the Consumer Advocate "reserves its rights to analyze the final costs incurred for each of these items in future rate proceedings and determine whether any adjustments may be necessary to the final project costs should there be significant deviations from the estimated costs presented in [HELCO's] application." The Consumer Advocate concludes that the HELCO-owned interconnection facilities and the facilities' costs, including the system betterment costs, "appear to be necessary and are thus reasonable."

VI.


HELCO states that the PPA is consistent with its Integrated Resource Plan, 1999 - 2018 ("IRP"), "taking into account current circumstances." While its IRP does not include independent power producer ("IPP") projects unless there is a signed power purchase agreement for the project, "it is contemplated that IPP firm capacity projects may defer utility

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24Id.
25Id. at 13 - 14.
26Id. at 16.
27HELCO's application, at 62, and Exhibit 11, page 1.
generation additions, and that IPP as-available energy projects may be added to the utility's system even though there is no explicit reference to these projects in the [IRP]."^{28}

The Consumer Advocate states that HELCO's plan to add additional renewable energy resources to its energy portfolio: (1) appears consistent with HELCO's IRP; (2) is consistent with the State of Hawaii's (the "State") energy policy encouraging the use and development of renewable energy (see HRS chapter 269, part V, Renewable Portfolio Standards); and (3) promotes the State's overall energy objectives set forth in HRS § 226-18(a).

VII.

Commission's Findings and Conclusions

HRS § 269-27.2 and HAR chapter 6-74, subchapter 3, governs the commission's review of the rates agreed upon between HELCO and HRD. HRS § 269-27.2(c) provides in relevant part:

1. The rate payable by the public utility to the producer for the nonfossil fuel generated electricity supplied to the public utility shall be as agreed between the public utility and the supplier and as approved by the public utilities commission.

2. The commission shall establish that the rate for purchase of electricity by a public utility shall not be less than one hundred (100) per cent of the cost avoided by the utility when the utility purchases the electrical energy rather than producing the electrical energy.

3. The commission shall consider, on a generic basis, the minimum floor a public utility should pay, giving consideration to, and encouraging the development of alternative sources of energy.

^{28}Id., at Exhibit 11, page 2.
HAR § 6-74-22 of chapter 6-74, subchapter 3, provides that the rates for purchase shall:

1. Be just and reasonable to the electric consumer of the electric utility and in the public interest;

2. Not discriminate against qualifying cogeneration and small power production facilities; and

3. Be not less than one hundred (100) per cent of avoided cost for energy and capacity purchases to be determined as provided in HAR § 6-74-23 from qualifying facilities and not less than the minimum purchase rate.

Notwithstanding HAR § 6-74-22, nothing in subchapter 3 prohibits an electric utility or any qualifying facility from agreeing to a rate for purchase, or terms or conditions relating to any purchase, which differ from the rates, terms, or conditions that would otherwise be required by subchapter 3.39

The commission makes the following findings and conclusions:

1. The energy charges to be paid by HELCO pursuant to the PPA, which are based on one hundred (100) per cent of HELCO's avoided energy cost payment rates, are reasonable and consistent with HRS § 269-27.2(c) and HAR §§ 6-74-15(b)(1) and 6-74-22, as applicable.30

2. The PPA's terms and conditions, as a whole, are reasonable and consistent with the public interest, HELCO's IRP, and the State's overall energy policy. Thus, the purchased power arrangements described in the PPA, pursuant to which HELCO

39HAR § 6-74-15(b)(1).

30The commission notes that, pursuant to the Parties' arms-length agreement, the PPA does not provide for minimum purchase rates. HAR § 6-74-15(b)(1).
purchases energy from HRD, are reasonable and in the public interest.

3. HELCO is authorized to include the purchased energy costs and related revenue taxes it incurs under the PPA, in its ECAC, to the extent that such payments are not recovered in its base rates.

4. The commitment of approximately $1,244,000 to construct the facilities needed to interconnection HELCO's system with HRD's wind farm, including the system betterment work, is reasonable and consistent with the public interest, HELCO's IRP, and the State's overall energy policy.

VIII.

Orders

THE COMMISSION ORDERS:

1. The PPA between HELCO and HRD, dated December 30, 2003, known as the Group B Contract, is approved.

2. The energy charges to be paid by HELCO pursuant to the PPA are reasonable.

3. The purchased power arrangements under the PPA, pursuant to which HELCO purchases energy from HRD, are reasonable and in the public interest.

4. HELCO may include, in its ECAC, the purchased energy costs and related revenue taxes that it incurs under the PPA, to the extent that such payments are not recovered in its base rates.
5. HELCO's request to commit approximately $1,244,000 to construct the facilities needed to interconnect HELCO's system with HRD's wind farm, including the system betterment work, is approved.

6. HELCO shall submit a report within sixty (60) days of the interconnection facilities' commercial operation, with an explanation of any deviation of ten (10) per cent or more in the project's cost from that estimated in the application. HELCO's failure to submit this report will constitute cause to limit the cost of the project, for ratemaking purposes, to that estimated in the application.

7. HELCO shall conform to all of the commission's orders set forth above. Failure to adhere to the commission's orders shall constitute cause for the commission to void this decision and order, and may result in further regulatory action as authorized by law.
DONE at Honolulu, Hawaii this 14th day of May, 2004.

PUBLIC UTILITIES COMMISSION
OF THE STATE OF HAWAII

By
Carlito P. Caliboso, Chairman

By
Wayne H. Kimura, Commissioner

By
Janet E. Kawelo, Commissioner

APPROVED AS TO FORM:

Michael Azama
Commission Counsel

04-0016.11
CERTIFICATE OF SERVICE

I hereby certify that I have this date served a copy of the foregoing Decision and Order No. 20979 upon the following parties, by causing a copy hereof to be mailed, postage prepaid, and properly addressed to each such party.

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DATED:  May 14, 2004