



BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF HAWAII

In the Matter of the Application of )		
HAWAIIAN ELECTRIC COMPANY, INC )	)	Docket No. 2011-0224
For Approval of Power Purchase )	)	Decision and Order No. <b>30012</b>
Energy Agreement for Renewable )	)	
As-Available Energy with Kawailoa )	)	
Wind, LLC, )	)	
_____ )	)	

DECISION AND ORDER

By this Decision and Order, the commission approves, subject to the terms and conditions described herein, the requests set forth in the application filed by HAWAIIAN ELECTRIC COMPANY, INC. ("HECO"), on September 23, 2011.<sup>1</sup> Specifically, the commission: (1) approves the Power Purchase Agreement for As-Available Energy between HECO and Kawailoa Wind, LLC ("Kawailoa" or "Seller"), dated September 21, 2011 ("PPA"); (2) authorizes HECO to include the purchased energy charges and

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<sup>1</sup>Hawaiian Electric Application; Exhibits 1 - 13; Verification; and Certificate of Service, filed on September 23, 2011; confidential Attachment filed on October 3, 2011 ("Application"). The Parties to this proceeding are HECO and the DIVISION OF CONSUMER ADVOCACY OF THE DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS ("Consumer Advocate"), a party, ex officio, to this proceeding, pursuant to Hawaii Revised Statutes ("HRS") § 269-51 and Hawaii Administrative Rules ("HAR") § 6-61-62(a). No persons moved to intervene or participate in this proceeding.

related revenue taxes that it incurs under the PPA in its Energy Cost Adjustment Clause ("ECAC"), to the extent that such costs are not included in HECO's base rates, for the term of the PPA; (3) finds that the purchased energy charges to be paid by HECO pursuant to the PPA are reasonable; (4) finds that the terms and conditions of the PPA between HECO and Kawaihoa, pursuant to which HECO purchases energy on an as-available basis from Kawaihoa, are prudent and in the public interest; and (5) determines that the 46 kilovolt ("kV") line extension (i.e., Company-Owned Interconnection Facilities), may be constructed above the surface of the ground, pursuant to HRS § 269-27.6(a)..

I.

Background

A.

Application

By Application filed on September 23, 2011, HECO, the franchised provider of electric utility service on the island of Oahu, requested commission approval, on or before December 15, 2011, of the PPA between HECO and Kawaihoa. Kawaihoa is a Hawaii limited liability company that was organized by First Wind, LLC, a Boston-based wind energy company, "for the express purpose of developing a wind power facility at

Kamehameha Schools' Kawaiiloa Plantation."<sup>2</sup> HECO informs that Kawaiiloa will design, construct, own, operate, and maintain a proposed 69 megawatt ("MW") wind farm to be located at Kawaiiloa on the north shore of Oahu ("Facility").<sup>3</sup>

The proposed 69 MW Facility will operate in parallel with HECO's system. The electric energy Kawaiiloa produces at the Facility will be provided to HECO "on an unscheduled basis as Seller determines to be available from its Facility . . . rather than at prearranged times and in prearranged amounts."<sup>4</sup>

The Facility, made of two separately interconnected sections, the "Makai Facility" and the "Mauka Facility," will be comprised of 30 Siemens SWT-2.3-101 wind turbine generators, rated at 2.3 MW, 60 hertz. The Makai Facility will include eight wind turbines, capable of delivering a maximum of 20 MW of electric power on a net instantaneous basis to the Makai Point of Interconnection located within the Makai Switching Station.

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<sup>2</sup>Application at 6. HECO and Kawaiiloa are collectively referred to as the "Contracting Parties."

<sup>3</sup>See Application at 10. The proposed Facility will be located approximately five miles northeast of Haleiwa town, on the north shore of Oahu, as further indicated on the map attached as Exhibit 2 to the Application. The site is more particularly identified by Tax Map Key Nos. (1)-6-1-005-001, (1)-6-1-006-001, and (1)-6-2-011-001.

<sup>4</sup>See Definition for "As-Available Energy," PPA Section Definitions, Application, Exhibit 1 at 7.

The Makai Switching Station will be connected to HECO's Waialua-Kahipa 46 kV line.<sup>5</sup>

The "Mauka Facility" will have 22 wind turbines, capable of delivering a maximum of 50 MW of electric power on a net instantaneous basis to the Mauka Point of Interconnection located within the Mauka Switching Station. The Mauka Switching Station will be connected to HECO's Waialua-Kuilima 46 kV line.<sup>6</sup>

An Interconnection Requirements Study ("IRS") was performed at Kawaiiloa's expense. According to HECO, the objective of the IRS was to:

[I]dentify any system-related interconnection requirements for both the Makai Facility and Mauka Facility in order to meet [HECO's] planning criteria, which included [HECO's] Criteria for Transmission Planning, Criteria for Subtransmission Planning and Transmission Planning Criteria for Stability Analysis.<sup>7</sup>

HECO explains that the technical requirements governing the interconnection of the Facility with HECO's system are based upon the findings and conclusions set forth in the IRS.<sup>8</sup> Indeed, a number of design aspects appear to have been developed as a result of the IRS, including:

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<sup>5</sup>See Id., Definition for "Makai Facility," "Makai Point of Interconnection," and "Makai Switching Station."

<sup>6</sup>See Id., Definition for "Mauka Facility," "Mauka Point of Interconnection," and "Mauka Switching Station."

<sup>7</sup>Application at 19.

<sup>8</sup>Application at 19.

(i) the number, capacity, design and performance of transformers, (ii) the addition of direct transfer trips to certain breakers, (iii) coordination of protective relays, (iv) limitations on closing certain breakers, (v) modification of certain transient low-voltage and over-voltage ride-through capabilities and certain transient under-frequency and over-frequency ride-through capabilities, and (vi) the requirement that the Facility only be operated under normal system configuration.<sup>9</sup>

HECO suggests that the findings of the IRS demonstrate that it is feasible to connect the Facility to the HECO system, and that "only minor impacts on the Company System" would occur such that there are "no special requirements beyond the normal Hawaiian Electric interconnection needs in those areas."<sup>10</sup>

B.

Renewable Energy Request for Proposals

The proposed project arises from HECO's Renewable Energy Request for Proposals ("RFP") under the commission's Framework for Competitive Bidding. The Final RFP was issued publicly and submitted to the commission in In re Pub. Util. Comm'n, Docket No. 2007-0331, on June 19, 2008 ("Docket No. 2007-0331"). Through its RFP, HECO sought proposals from potential independent power producers for the supply of up to

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<sup>9</sup>Id.

<sup>10</sup>Id. (summarizing Application, Exhibit 5).

approximately 100 MW of long-term renewable energy for Oahu under power purchase agreements.

HECO explains that it used a multi-stage evaluation process to review and select proposals.<sup>11</sup> In addition, while not required by the Competitive Bidding Framework for this RFP process, HECO chose to work with an independent observer ("IO") to oversee the fairness of the RFP process and provide information and guidance to the commission, among other things.<sup>12</sup>

In the Report of the Independent Observer on Hawaiian Electric Company's Negotiation and Execution of a Power Purchase Agreement with Kawaiiloa Wind, LLD, Overall Assessment of the RFP Process, and Recommendations for Future Improvements, filed on October 11, 2011, in Docket No. 2007-0331 ("Report of IO"), the IO states that "there were many twists and turns from the initial proposal submitted to HECO in September 2008 to the project to be built under the Kawaiiloa PPA."<sup>13</sup> Notwithstanding such "twists and turns," the IO concluded that "HECO's negotiation and execution of the Kawaiiloa Wind PPA was

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<sup>11</sup>For a detailed analysis of the evaluation process, see RFP, submitted to the commission on June 19, 2008, in Docket No. 2007-0331. See also Application at 14 - 15 and Application, Exhibit 7.

<sup>12</sup>See Order No. 23699, filed on October 9, 2007, in Docket No. 2007-0331 (opening the docket to receive filings and approving the IO's contract with HECO).

<sup>13</sup>IO Report, filed on October 11, 2011, in Docket No. 2007-0331, at 2.

materially in accord with the RFP, as approved by the [c]ommission, and the [Competitive Bidding] Framework."<sup>14</sup>

C.

Site

The Facility will be located on an approximately 7,187-acre parcel of real property located approximately five miles northeast of Haleiwa town. The proposed site is comprised almost entirely of Kawaihoa Plantation lands, which are owned by Kamehameha Schools.

Kawaihoa represents to HECO that it entered into a Development Agreement with Kamehameha Schools on July 19, 2011, which was amended by a First Amendment to Development Agreement, effective as of the same date ("Development Agreement"). Kawaihoa further explains to HECO that the Development Agreement allows Kawaihoa a non-exclusive easement for the development, construction, and operation of the Facility on the site, as well as a non-exclusive license for ingress and egress, upon attainment of certain conditions, including execution of the PPA and securing adequate financing. The term of the easement and license grants will be 20 years, with automatic extensions

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<sup>14</sup>Id. at 20.



if the PPA is extended. The land upon which the Facility will be built is classified "agricultural" by the State of Hawaii and zoned by the City and County of Honolulu as "AG-1 Restricted Agricultural."<sup>15</sup>

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<sup>15</sup>See Application at 11. In addition, pursuant to PPA, Appendix C, Section 6 - Site Restoration, Kawaiiloa must restore the land or site to its condition prior to construction of HECO and Kawaiiloa-owned interconnection facilities. Specifically, the PPA states that

The Seller shall, at its expense, remove all (1) Company-Owned Interconnection Facilities from the site and (2) Seller-Owned Interconnection Facilities designated by [HECO], provided that. [HECO] may elect to remove all or part of such designated Company-Owned Interconnection Facilities and/or designated Seller-Owned Interconnection Facilities because of operational concerns over the removal of such Interconnection Facilities, in which case Seller shall reimburse [HECO] for its costs to remove such Company-Owned Interconnection Facilities and/or Seller-Owned Interconnection Facilities.

PPA, Appendix C, Section 6, Site Restoration.

In addition, HECO states that Kawaiiloa represented to it that Kawaiiloa's agreement with Kamehameha Schools requires that within 12 months of the termination of the PPA, unless a replacement PPA has been executed, the decommissioning and removal all above-ground equipment, removal of below-ground equipment (to a depth of 24 inches, which is industry standard), and the restoration and re-vegetation of the site. Decommissioning and restoration is also required by the project's Conditional Use Permit, recently issued by the City and County of Honolulu.

See HECO's Response to CA-IR-4, PUC-IR-108.

D.

Terms of the PPA

HECO states that the specific terms and conditions of the PPA were negotiated by the Contracting Parties over a period of almost two years.<sup>16</sup>

1.

Term

The term of the PPA commences upon the date of execution of the PPA and remains in effect for an initial term of 25 years following the Commercial Operations Date, unless the conditions precedent to the Step Down Pricing (discussed at Section D.2., below) have been satisfied, in which case the initial term is 20 years following the Commercial Operations Date. The PPA automatically continues after the initial term, until terminated by either Contracting Party.<sup>17</sup>

2.

Pricing

As set forth in the PPA, Kawaihoa agrees to deliver to HECO all of the Actual Output of energy produced and delivered

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<sup>16</sup>Id.

<sup>17</sup>See Application at 24. See also, Application, Exhibit 1 at 44, Section 12, Term of Agreement; Effect of PUC Approval Date on Guaranteed Commercial Operations Date.

to the Point of Interconnection.<sup>18</sup> The rate for each megawatt hour ("MWh") of energy over the 25-year period will be \$205.40 per MWh for 2012 and 2013, escalated at 1.75 percent annually.<sup>19</sup> The Contracting Parties provide for an alternative pricing scheme - a Step Down Price - that is dependent on the Contracting Parties successfully meeting certain conditions. Under Step Down Pricing, energy over a 20-year period will begin at \$205.40 per MWh in 2012 and 2013, and escalate at 1.5 percent annually. Step Down Pricing shall apply if either of the following conditions occur: (1) if the commission approves the PPA on or before December 15, 2011<sup>20</sup> and HECO completes the Company-Owned Interconnection Facilities on or before the Energization Deadline;<sup>21</sup> or (2) HECO completes the Company-Owned

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<sup>18</sup>"Actual Output" is defined as "[t]he total quantity of electric energy (measured in kilowatt hours) produced by the Facility over a given time period and delivered to the Point of Interconnection, as measured by the revenue meter." See Application, Exhibit 1, at 6.

<sup>19</sup>See Application, Exhibit D-1, at 171.

<sup>20</sup>HECO explains that the importance of the December 15, 2011 date for the requested decision and order is necessary for Kawaihoa to decide whether to place orders for long lead items, such as wind turbines and transformers. See Application at 27.

<sup>21</sup>"Energization Period" is defined to include: First Energization Deadline of September 15, 2012, as such date may be extended; Second Energization Deadline, which is the later of October 15, 2012, or 30 days after the First Energization Deadline; and Third Energization Deadline, which is the day that is 107 days prior to the Extended Guaranteed Commercial Operations Date, as such day may be extended. See Definitions, Application, Exhibit 1, at 7, 9, 17, and 18.

Interconnection Facilities on or before the Second Energization Deadline and the Facility's wind turbines are eligible for the federal Investment Tax Credit.<sup>22</sup> Accordingly, the rate schedules under the two pricing alternatives would be as follows:

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<sup>22</sup>HECO explains that the lower Step Down Pricing will become effective regardless of the tax credit:

Under current law, wind turbines placed in service prior to January 2013 may qualify for the 30% Investment Tax Credit ("ITC") under § 1102 of the American Recovery and Investment Act of 2009. Because of the lower energy pricing (referred to in the PPA as "Step Down Pricing") if the wind farm qualifies for the ITC, the [Contracting] Parties have agreed to several PPA provisions with the objective of enhancing the prospects of qualifying for the ITC . . . . In general, the [Contracting] Parties have allocated the ITC risk as follows: if the Commission issues the requested decision and order on or before December 15, 2011 and Hawaiian Electric energizes the Company-Owned Interconnection Facilities on or before September 15, 2012, the ITC-driven Step Down Pricing will apply regardless of whether [Kawailoa] completes commissioning of the wind turbines in time to qualify for ITC.

Application at 2-3 (footnote omitted).

<b>Payment Year</b>	<b>Base Case Pricing Total (\$ / MWh)</b>	<b>Step Down Pricing Total (\$ / MWh)</b>
2012	205.40	205.40
2013	205.40	205.40
2014	208.99	208.48
2015	212.65	211.61
2016	216.37	214.78
2017	220.16	218.00
2018	224.01	221.27
2019	227.93	224.59
2020	231.92	227.96
2021	235.98	231.38
2022	240.11	234.85
2023	244.31	238.38
2024	248.59	241.95
2025	252.94	245.58
2026	257.36	249.26
2027	261.87	253.00
2028	266.45	256.80
2029	271.11	260.65
2030	275.86	264.56
2031	280.69	268.53
2032	285.60	272.56
2033	290.60	
2034	295.68	
2035	300.86	
2036	306.12	
2037	311.48	

The PPA also includes a price adjustment, which provides that the pricing set forth above shall be increased by \$0.075/MWh for every \$100,000 by which actual costs for the Company-Owned Interconnection Facilities exceed \$19,050,000, and shall be decreased by \$0.075/MWh for every \$100,000 by which

actual costs for the Company-Owned Interconnection Facilities are less than \$17,230,000.<sup>23</sup>

HECO asserts its key considerations in the pricing negotiations with Kawaiiloa included:

- (1) Hawaiian Electric's desire for additional renewable energy resources;
- (2) The objective of delinking the energy pricing from fossil fuel prices;
- (3) Pricing of energy from other PV [sic] projects; and
- (4) Pricing of the proposal compared to Hawaiian Electric's long-run avoided energy costs (taking into consideration uncertainties with respect to future oil prices).<sup>24</sup>

HECO advises that it conducted pricing evaluation and analyses of the Kawaiiloa pricing, and concluded such pricing is reasonable because the Kawaiiloa pricing:

- (1) Is within the range of historical filed avoided costs for the Company;
- (2) Meets the requirement of HRS § 269-27.2(c) by delinking the energy pricing from the cost of fossil fuels;

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<sup>23</sup>Cost changes in increments of less than \$100,000 will result in a proportional adjustment. If actual costs for the Company-Owned Interconnection Facilities exceed \$20,000,000, HECO shall pay the amount of any such excess. No increase in pricing shall occur to the extent Seller is responsible for the costs of the Company-Owned Interconnection Facilities exceeding \$18,149,000 (for example, because of a change requested by Seller to the Company-Owned Interconnection Facilities) and to the extent Seller is responsible for the costs of the Company-Owned Interconnection Facilities exceeding \$20,000,000 (for example, because of a change requested by Seller to the Company-Owned Interconnection Facilities). See Application, Exhibit 1, at 170.

<sup>24</sup>Application at 17.

- (3) Contributes to stabilizing Hawaiian Electric's overall energy prices over time;
- (4) Is comparable to the pricing of other wind projects; and
- (5) Is within the estimated upper and lower bound of Hawaiian Electric's long-run avoided costs based on the net present value ("NPV") of energy payments to Kawaiiloa.<sup>25</sup>

According to HECO, the PPA pricing is reasonable and in the public interest, because it is based on a "pricing structure and pricing level determined through a series of proposals and arms-length negotiations between the [Contracting] Parties."<sup>26</sup>

3.

HECO-Owned Interconnection Facilities

The Contracting Parties established separate attachments describing the interconnection facilities to be constructed and maintained by HECO and Kawaiiloa.<sup>27</sup> According to the PPA, Kawaiiloa will furnish, install, operate, and maintain the Facility, which includes 30 wind turbines, Seller's facility

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<sup>25</sup>Application at 18.

<sup>26</sup>Id. at 25.

<sup>27</sup>See Company-Owned Interconnection Facilities, Attachment C to the PPA. Application, Exhibit 1, at 140. See also Appendix B to the PPA for interconnection facilities to be owned by Kawaiiloa. Application, Exhibit 1, at 104.

substation, 46 kV overhead subtransmission line extension connecting the Seller's 20 MW Makai transformer to the Company-Owned Interconnection Facilities, OPGW fiber optic line connecting the Mauka Switching Station and the Makai Stitching Station, underground fiber optic line connecting the Mauka Switching Station and the Makai Switching Station, 23kV collection system, operations and maintenance building, civil roads and pads, and other ancillary foundations, meteorological towers, etc. to support the project infrastructure.

Because the Contracting Parties concluded while negotiating the PPA that HECO's usual practice of placing the obligation to build Company-Owned Interconnection Facilities on Kawaihoa would not permit the Facility's wind turbines to be placed in service on or before the current December 31, 2012 tax credit deadline, HECO will construct, operate, maintain, and own all Company-Owned Interconnection Facilities required to interconnect the Facility to the HECO system at 46,000 volts, up to the Makai Demarcation Point and the Mauka Demarcation Point.<sup>28</sup> In addition, the Contracting Parties concluded during the negotiations process that HECO's usual solicitation of competitive bids for the construction of the Company-Owned Interconnection Facilities would also not allow Kawaihoa to

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<sup>28</sup>See Application, Exhibit 1, Definitions of "Makai Demarcation Point" and "Mauka Demarcation Point"; Appendix C Section 1 (a).



place its wind turbines into service by the December 31, 2012 tax credit deadline. Accordingly, the Contracting Parties agreed that HECO would directly award the contract for the Company-Owned Interconnection Facilities to Black and Veatch.

As stated in the PPA, the total estimated Interconnection Cost is approximately \$18,135,971.<sup>29</sup> This amount represents estimates of the costs incurred or to be incurred by HECO to interconnect its system with the Facility, and is subject to amendment as supplemental studies, detailed engineering and design, and implementation progresses.<sup>30</sup>

4.

Continuity of Service

According to HECO, "the net instantaneous MW output from the Facility may not exceed (i) 50 MW for the Mauka Facility and (ii) 20 MW for the Makai Facility."<sup>31</sup> In addition, pursuant to the PPA, HECO may require Kawaiiloa to temporarily curtail, interrupt, or reduce the delivery of energy to HECO's electrical system under certain specified conditions, excluding HECO's economic dispatch. That said, however, HECO is obligated under the PPA to "take all reasonable steps . . . to minimize

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<sup>29</sup>See Application, Exhibit 1, at 148.

<sup>30</sup>See Application at 22.

<sup>31</sup>See Application, Exhibit 1, at 28.

the number and duration of curtailments, interruptions, or reductions. . . ."<sup>32</sup> In the event that HECO initiates a qualifying curtailment event, it "shall not be obligated to accept or pay for any energy from [Kawailoa] except for such energy that [HECO] notifies [Kawailoa] that it is able to take during the duration of a Curtailment Event."<sup>33</sup>

5.

Construction Milestones

According to the terms of the PPA, Kawailoa is required to achieve the "Commercial Operations Date" on or before the later of December 31, 2012, or 13 months after the effective date of the PPA.<sup>34</sup>

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<sup>32</sup>See Id. at 40.

<sup>33</sup>See Id. at 39.

<sup>34</sup>Id. at 14. "Guaranteed Commercial Operations Date ("GCOD")" is defined as:

(i) The later of December 31, 2012, or thirteen (13) months after the Effective Date [of the PPA], or (ii) if a PUC Approval Order is entered after December 15, 2012, then the GCOD is the later of December 31, 2013 or thirteen (13) months after the Effective Date, provided Seller either (x) gives [HECO] an Extended GCOD Notice no later than the Continuation Notice on or before the Extended GCOD Notice Deadline."

Application, Exhibit 1, at 14.

Other Provisions

Provisions governing default and termination,<sup>35</sup> indemnification,<sup>36</sup> contract assignment,<sup>37</sup> and force majeure (i.e., causes or events beyond the reasonable control of, and without the fault or negligence of the party claiming force majeure)<sup>38</sup>, Good Engineering and Operating Practices,<sup>39</sup> and dispute resolution<sup>40</sup> are included in the PPA. Moreover, Kawaiiloa must at its expense during the term and during any time that the Facility is interconnected with HECO's system,

[S]ecure and maintain in effect with a responsible insurance company authorized to do business in Hawaii the following insurance that will protect Seller and [HECO]. Seller shall maintain commercial general liability insurance with respect to the Facility, Seller's operations, and Seller's interconnection with [HECO's] system. . . .<sup>41</sup>

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<sup>35</sup>See Application, Exhibit 1 at 53, Section 15, Events of Default.

<sup>36</sup>Id. at 55 - 60, Section 17, Indemnification.

<sup>37</sup>Id. at 64 - 66, Section 19, Transfers, Assignments and Facility Debt.

<sup>38</sup>Application, Exhibit 1 at 66 - 67, Section 21, Force Majeure.

<sup>39</sup>Id. at 78 - 79, Section 25, Good Engineering and Operating Practices.

<sup>40</sup>Id. at 80 - 86, Section 28, Dispute Resolution.

<sup>41</sup>Id. at 63, Section 18, Insurance.

Kawailoa must also provide all information reasonably requested by HECO to enable HECO and its parent entity to comply with the financial reporting requirements under federal law.<sup>42</sup>

E.

Overhead Transmission Line

HECO also requests commission approval for the installation of a 46 kV transmission line above the surface of the ground. According to HECO, the scope of the request includes:

[P]lacement of five (5) 46 kV overhead line extensions (three to the Makai Switching Substation and two to the Mauka Switching Substation) estimated at \$579,134 and \$255,291, respectively.

. . . .

The scope of the Makai Switching Station portion of the Kawailoa project includes the extension of six (6) new spans of the Waialua-Kahipa 46 kV overhead line to the Facility location (TMK 6-1-5:001) off Ashley Road and one (1) new span of 46 kV overhead line between the Makai Switching Station and the last [Kawailoa] pole coming from [Kawailoa's] Substation. . . .

. . . .

The scope of the Mauka Switching Station portion of the Kawailoa project includes the extension of two (2) new spans of the Waialua-Kuilima 46 kV overhead line to the Facility location (TMK 6-1-6:001) off Ashley Road. The cost

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<sup>42</sup>Id. at 76, Section 24, Financial Compliance.

includes the installation of new poles to extend the Waialua-Kuilima 46 kV line. . . .<sup>43</sup>

According to HECO, the installation of the proposed lines would not create a material visual impact, because of the existing 46 kV overhead lines in the area.<sup>44</sup> In addition, HECO asserts that the benefits, if any, of placing the 46 kV lines underground do not outweigh the costs, estimating that it would cost approximately three times more to underground the lines, or \$2,468,185 to install the 46 kV line underground, as opposed to the overhead work, which would cost approximately \$834,425.<sup>45</sup> HECO advises that Kawaihoa was not willing to pay the additional costs to underground the 46 kV lines. No other parties (including governmental agencies) were asked to pay for the additional costs of undergrounding at its expense. Finally, HECO notes that it is unaware of any governmental public policy requiring that these lines be constructed underground and notes no other relevant factors of which it is aware.

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<sup>43</sup>Application at 36.

<sup>44</sup>Id. at 37.

<sup>45</sup>Id. at 37. HECO also asserts that a public hearing regarding the proposed construction of the overhead lines under HRS § 269-27.5 is not required because there are no existing homes near the project site. HECO states that due to the "existing vegetation along Kamehameha Highway and within the project site along the undulating terrain" view to the sight lines will be limited. Moreover, HECO explains that "the closest existing homes are located approximately 1000 feet away from the Makai Switching Station and roughly 2.2 miles away from the Mauka Switching Station." Id. at 38.

F.

Consumer Advocate's Position

On November 29, 2011, the Consumer Advocate filed its Statement of Position, stating that it does not object to HECO's requested relief, subject to certain conditions.<sup>46</sup>

With respect to the energy charges proposed in the PPA, the Consumer Advocate notes at the outset, as it did in Docket No. 2011-0185, In re Hawaiian Elec. Co., a general concern with the cost-effectiveness of the PPA pricing, given the commission's recent Decision and Order, rejecting the fuel contract filed by HECO with Aina Koa Pono, in Docket No. 2011-0005. Specifically, the Consumer Advocate states:

[T]he Consumer Advocate notes that using the apparent benchmark established by the Commission in its Decision and Order, filed on September 29, 2011, in Docket No. 2011-0005 ("2011-0005 Decision and Order"), the instant PPA may not appear to be "cost-effective" under either the Base Pricing or Step Down Pricing on a comparison with fossil fuel pricing reflected in the avoided cost. Furthermore, to the extent that the benchmark to avoided cost is considered a primary factor, several prior purchase power agreements (e.g., Docket Nos. 2009-0176, 2010-0010, and 2011-0051) would not have been approved since the agreed upon pricing exceeded the estimated avoided cost in those respective proceedings.<sup>47</sup>

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<sup>46</sup>Consumer Advocate's Statement of Position; and Certificate of Service, filed on November 29, 2011 (collectively, "Consumer Advocate's SOP").

<sup>47</sup>Consumer Advocate's SOP at 15-16.

The Consumer Advocate: (1) observes that "[i]f this and any other renewable energy project are judged primarily or solely based upon a price comparison to avoided costs, the result will be a rejection of these projects"; and (2) concludes that "the State of Hawaii needs renewable energy immediately and that the [c]ommission cannot wait until fossil fuel prices increase significantly before approving renewable energy projects."<sup>48</sup>

In reviewing the overall pricing, the Consumer Advocate acknowledged it has not relied on the HECO Companies' avoided costs to evaluate the prices of renewable energy projects. Instead, the Consumer Advocate "analyzed power purchase agreements and supply contracts for renewable energy projects based upon pricing of similar contracts that have been approved by the [c]ommission." In addition, the Consumer Advocate reviewed the probable or likely bill impact that the PPA would have upon a typical HECO customer using approximately 600 kWh/month of energy.

The Consumer Advocate recognizes a number of uncertainties that exist, which complicates the process of weighing the ultimate cost to ratepayers against other various State objectives. In reviewing such power purchase agreements, the Consumer Advocate notes that it "strives to balance the various objectives of public interest (e.g., sustainability,

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<sup>48</sup>Id. at 17.

costs, reliability, etc.) and the varying objectives of the stakeholders associated with power purchase agreements."<sup>49</sup> After consideration of the various factors in the instant docket, the Consumer Advocate concludes that:

The estimated levelized price of the proposed PPA falls within the range of other prior [c]ommission-approved PPAs and is at an identical price as the Kahuku Wind Power PPA approved by the [c]ommission in Docket No. 2009-0176.

The highest increase to the estimated monthly bill for a typical residential customers [sic] (i.e., \$1.17) in the near future (i.e., year 2022) is reasonable, especially when recognizing that there are great uncertainties with forecasted fuel prices.

Although, several specific terms and conditions differ from the Model RE PPA and other prior [c]ommission-approved power purchase agreements, these instant terms and conditions do not appear to be discriminatory to [Kawailoa] or other PPAs [of other independent power producers].

The significant contribution that the proposed [Kawailoa] facility will provide HECO's [Renewable Portfolio Standards ("RPS")]. It does not appear that [Kawailoa's] facility will impact HECO's ability to provide reliable and quality electric service.

The [Kawailoa] project is consistent with the North Shore Sustainable Communities Plan and the community efforts of Kamehameha Schools.<sup>50</sup>

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<sup>49</sup>Id. at 24.

<sup>50</sup>Id. at 36.



In sum, and after consideration of these factors, the Consumer Advocate does not object to the PPA.<sup>51</sup>

With respect to the alternative pricing option included in the PPA, the Consumer Advocate notes that the Step Down Pricing is similar to that approved by the commission in its Decision and Order, filed on May 12, 2010, in Docket No. 2010-0279, which included a price adjustment that was dependent on whether certain operational measures were implemented by Maui Electric Company, Limited. Due to the estimated RPS contribution and in balancing the needs of the developer and the electric utility ratepayer, the Consumer Advocate finds that the Step Down Pricing is a reasonable alternative to the Base Pricing.<sup>52</sup>

With respect to the sharing of the risk associated with the actual costs of the Company-Owned Interconnection Facilities, the Consumer Advocate recommends that HECO report the occurrence of and reasons for HECO's failure to energize the Company-Owned Interconnection Facilities by September 15, 2012, and the triggering of Base Pricing. The Consumer Advocate reasons that such reporting will ensure "that an assessment can

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<sup>51</sup>Id.

<sup>52</sup>Id. at 37.

be made that the resultant Base Pricing was not a result of imprudent actions (or non-actions) taken by HECO."<sup>53</sup>

The Consumer Advocate recommends that any cost overruns associated with the Company-Owned Interconnection Facilities should not be covered by HECO at this time and should instead be subject to review in HECO's next rate proceeding or equivalent cost-recovery mechanism (e.g., decoupling) following the completion of the Company-Owned Interconnection Facilities.

The Consumer Advocate states that it does not object to HECO's request to include the purchased energy charges, and related revenue taxes in HECO's ECAC, to the extent that they are not included in base rates, subject to the concerns raised above.<sup>54</sup> Finally, the Consumer Advocate lists the use of an area that is considered to be a "brownfield" site for such a project is another "notable benefit" of the project.<sup>55</sup>

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<sup>53</sup>Id. at 38.

<sup>54</sup>Id. at 20.

<sup>55</sup>Id. at 19.

G.

HECO's Reply

In a letter dated December 2, 2011, HECO advised that it will not be submitting a Reply Statement of Position.<sup>56</sup> HECO further clarified, in response to the Consumer Advocate's concerns in the Consumer Advocate's SOP relating to the triggers for use of Step Down Pricing, that "even if the [Company-Owned Interconnection Facilities are] not energized by September 15, 2012, Step Down Pricing could still be achieved under the 'Grace Period Condition.'"<sup>57</sup> Specifically, HECO offered, by way of example, that Step Down Pricing could apply if "(i) the [c]ommission's approval order is issued by December 15, 2011, (ii) the [Company-Owned Interconnection Facilities are] energized by October 15, 2012, and (iii) [Kawailoa] commissions its wind turbines in time to be eligible for the investment tax credit."<sup>58</sup>

HECO also notes that it agrees to file a report, within a reasonable period (30 days), in the event that HECO

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<sup>56</sup>See Letter from Darcy L. Endo-Omoto to the commission, dated and filed on December 2, 2011 ("Reply Letter").

<sup>57</sup>Reply Letter at 1.

<sup>58</sup>Id. at 2.

fails to energize the Company-Owned Interconnection Facilities by September 15, 2012.<sup>59</sup>

## II.

### Discussion

As set forth in the Stipulated Procedural Order, filed November 8, 2011, the issues in this docket are:

1. Whether the PPA by and between Hawaiian Electric and [Kawailoa], dated September 21, 2011, should be approved?
  - a. Whether Hawaiian Electric should be allowed to include the purchased energy charges (and related revenue taxes) that Hawaiian Electric incurs under the PPA in and through Hawaiian Electric's Energy Cost Adjustment Clause, to the extent that they are not included in Hawaiian Electric's base rates.
  - b. Whether the energy charges to be paid by Hawaiian Electric pursuant to the PPA are reasonable.
  - c. Whether Hawaiian Electric's purchase power arrangements under the PPA are prudent and in the public interest.
2. Whether Hawaiian Electric may construct the proposed 46 kV line extensions included as part of the Company-Owned Interconnection

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<sup>59</sup>Id. HECO further provides that the review of the report should be done after it is known whether Step Down Pricing is achieved as a result of the Grace Period Condition having been satisfied.

Facilities above the surface of the ground, pursuant to Hawaii Revised Statutes ("HRS") §269-27.6(a).<sup>60</sup>

A.

The PPA and ECAC

HECO seeks the commission's approval of the PPA and the recovery of certain associated costs through the ECAC, pursuant to HRS § 269-27.2 and HAR § 6-60-6(2). HRS § 269-27.2(c), governing non-fossil fuel producers, states:

The rate payable by the public utility to the producer for the non-fossil 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; provided that in the event the public utility and the supplier fail to reach an agreement for a rate, the rate shall be as prescribed by the public utilities commission according to the powers and procedures provided in this chapter.

The commission's determination of the just and reasonable rate shall be accomplished by establishing a methodology that removes or significantly reduces any linkage between the price of fossil fuels and the rate for the non-fossil fuel generated electricity to potentially enable utility customers to share in the benefits of fuel cost savings resulting from the use of non-fossil fuel generated electricity. As the commission deems appropriate, the just and reasonable rate for non-fossil fuel generated electricity supplied to the public utility by the producer may include mechanisms for reasonable and appropriate incremental adjustments, such as

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<sup>60</sup>See Stipulated Procedural Order, filed September 26, 2011, at 3.

adjustments linked to consumer price indices for inflation or other acceptable adjustment mechanisms.<sup>61</sup>

HAR § 6-60-6(2) states:

No changes in fuel and purchased energy costs may be included in the fuel adjustment clause unless the contracts or prices for the purchase of such fuel or energy have been previously approved or filed with the commission . . . .<sup>62</sup>

Thus, the commission must approve the PPA or the rates for purchase under the PPA, to allow HECO to include the costs of purchased energy under its PPA in its ECAC. The commission, upon review of the docket record, makes the following findings and conclusions:

1. Pursuant to the PPA, the initial base energy purchase rate for 2012 will be \$205.40 under the Base Case Pricing and Step Down Pricing, as may be adjusted, depending on whether the actual costs for the Company-Owned Interconnection Facilities.<sup>63</sup> While this amount, as escalated over the term of the contract, is generally consistent with other pricing recently approved by the commission,<sup>64</sup> the commission again urges

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<sup>61</sup>See HRS § 269-27.2(c) (emphasis added).

<sup>62</sup>See HAR § 6-60-6.

<sup>63</sup>See Application, Exhibit 1, at 171 - 172.

<sup>64</sup>See e.g., Docket No. 2011-0051, In re Hawaiian Elec. Co. and Docket No. 2011-0185, In re Hawaiian Elec. Co. See also, comparisons of estimated levelized pricing with the IO Report at

HECO to continue to work with independent power producers to seek out efficiencies and find the lowest reasonable prices for renewable energy.

2. Under either the Base Case Pricing or the Step Down Pricing, the PPA pricing structure is delinked from HECO's future oil prices, consistent with the requirements of HRS § 269-27.2(c).

3. On balance, based on findings 1 and 2, above, the energy purchase rates set forth in the PPA appear reasonable, are consistent with, and satisfy: (A) HRS chapter 269 in principle; and (B) HRS § 269-27.2(c), in particular. Specifically, this pricing methodology comports with HRS § 269-27.2(c) in that the pricing significantly reduces any linkage between the price of fossil fuels and the rate for the non-fossil fuel generated electricity. While the commission, in this instance, finds the pricing to be reasonable, the commission makes clear that its decision to approve the PPA is not based solely on energy pricing, but includes other factors, such as the State's need to limit its dependence on fossil fuels and mitigate against volatility in oil pricing, among other policy concerns.<sup>65</sup>

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12 and in HECO's Response to CA-IR-17, in Docket No. 2011-0112, as noted by the Consumer Advocate in its SOP at 21.

<sup>65</sup>See also HRS § 269-6(b) (the commission shall consider the need to reduce the State's reliance on fossil fuels through

4. Accordingly, the commission approves the energy purchase rates set forth in the PPA, provided, however, that in the event that the Base Case Pricing is triggered because of HECO's failure to timely energize the Company-Owned Interconnection Facilities by the applicable Energization Deadline, HECO shall provide a written report, within 30 days of its failure to timely energize the facilities, notifying the commission and the Consumer Advocate that the Company-Owned Interconnection Facilities were not timely energized by the applicable Energization Deadline and a summary of the reasons therefor.

5. The provisions governing interconnection are reasonable, and: (A) set forth the terms and conditions for the delivery of as-available energy from Kawaihoa's Facility to HECO's system, consistent with the PPA; and (B) provide HECO's system and equipment with the appropriate protection and safeguards related to the interconnection of Kawaihoa's facility.<sup>66</sup>

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energy efficiency and increased renewable energy generation in exercising its authority and duties under this chapter. . . .).

<sup>66</sup>The commission notes that Appendix B includes, among other things, performance standards that Kawaihoa must meet. The commission notes that there appear to be emerging standards and technologies that may provide for increased amounts of renewable energy on HECO's system, while maintaining reliability. The commission instructs HECO to uniformly apply, to the extent feasible, its performance standards, utilize all cost-effective



6. The estimated cost for the HECO-owned Interconnection Facilities of \$18,135,971 generally appears reasonable, and does not significantly impact the proposed rates. However, any cost overruns associated with the Company-Owned Interconnection Facilities shall not immediately be recovered by HECO, but shall instead be subject to review in HECO's next rate proceeding or equivalent cost-recovery mechanism (e.g., decoupling review) following the completion of the Company-Owned Interconnection Facilities. Accordingly, any price adjustment resulting from cost overruns may not immediately be included in HECO's ECAC until such cost overruns are reviewed.

7. In addition, the terms and conditions of the PPA, as a whole appear reasonable and consistent with the State's overall energy policy of reducing the State's dependence on fossil fuel. Thus, the purchased power arrangements under the PPA, pursuant to which HECO will purchase energy from Kawaiiloa, appear prudent and in the public interest.

8. HECO is hereby authorized to include the purchased energy charges and related revenue taxes that it incurs under the PPA in its ECAC.

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measures to maximize renewable energy penetration, and leverage available grid support functions from variable generation.

B.  
Construction of an Overhead Transmission Line Under  
HRS § 269-27.6(a)

As set forth in HRS § 269-27.6(a):

Notwithstanding any law to the contrary, whenever a public utility applies to the public utilities commission for approval to place, construct, erect, or otherwise build a new 46 kilovolt or greater high-voltage electric transmission system, either above or below the surface of the ground, the public utilities commission shall determine whether the electric transmission system shall be placed, constructed, erected, or built above or below the surface of the ground; provided that in its determination, the public utilities commission shall consider:

- (1) Whether a benefit exists that outweighs the costs of placing the electric transmission system underground;
- (2) Whether there is a governmental public policy requiring the electric transmission system to be placed, constructed, erected, or built underground, and the governmental agency establishing the policy commits funds for the additional costs of undergrounding;
- (3) Whether any governmental agency or other parties are willing to pay for the additional costs of undergrounding;
- (4) The recommendation of the division of consumer advocacy of the department of commerce and consumer affairs, which shall be based on an evaluation of the factors set forth under this subsection; and
- (5) Any other relevant factors.<sup>67</sup>

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<sup>67</sup>See HRS § 269-27.6(a). The commission also determines that the public hearing requirement, as set forth under HRS §

First, under HRS § 269-27.6(a)(1), there does not appear to be any benefit that exists that outweighs the costs associated with constructing the 46 kV line extension underground. As noted by HECO, the estimated cost for the proposed 46kV overhead line work described in the application is approximately \$834,425, whereas the cost to construct the proposed 46kV line underground is approximately \$2,468,185.<sup>68</sup>

Second, under HRS § 269-27.6(a)(2), the commission is not aware of any governmental policies requiring the underground placement of the line. While there have been State legislative efforts to study the feasibility of requiring underground placement of utility facilities, none of the recommendations have resulted in a legislative mandate to underground electric transmission lines.

Third, under HRS § 269-27.6(a)(3), the commission is not aware of any governmental agency or any other party willing to pay for the additional costs of placing the lines entirely underground.

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269-27.5, has not been triggered because the proposed transmission lines will not pass through any residential area.

<sup>68</sup>Application at 38. HECO also asserts that a public hearing regarding the proposed construction of the overhead lines under HRS § 269-27.5 is not required because "the impact, visual and otherwise, to the existing nearby homes should be minimal." Id.

Fourth, under HRS § 269-27.6(a)(4), the commission recognizes that the Consumer Advocate, after reviewing the Project under HRS § 269-27.6(a), stated that it does not object to overhead placement of the 46kV line extension.

Based on the foregoing, the commission concludes that the overhead construction of the 46 kV transmission line in association with the Proposed Project, in the manner set forth in the Application, should be approved.

### III.

#### Orders

##### THE COMMISSION ORDERS:

1. The PPA is approved, subject to the terms and conditions provided herein.

2. The terms and conditions of the purchased power arrangements under the PPA pursuant to which HECO will purchase energy on an as-available basis from Kawaiiloa, are prudent and in the public interest.

3. The purchased energy charges to be paid by HECO pursuant to the Power Purchase Agreement for As-Available Energy between HECO and Kawaiiloa Wind, LLC, dated September 21, 2011, on balance, are reasonable.

4. If Base Case Pricing is triggered because of HECO's failure to timely energize the Company-Owned

Interconnection Facilities by the applicable Energization Deadline set forth in the PPA, HECO shall provide a written report, within 30 days of its failure to timely energize the facilities, notifying the commission and the Consumer Advocate that the Company-Owned Interconnection Facilities were not timely energized by the applicable Energization Deadline and a summary of the reasons therefor.

5. Any cost overruns in excess of HECO's estimated \$18,135,971 associated with the Company-Owned Interconnection Facilities shall not immediately be recovered by HECO upon completion of the Company-Owned Interconnection Facilities, but shall instead be subject to review in HECO's next rate proceeding or equivalent cost-recovery mechanism (e.g., decoupling review) following the completion of the Company-Owned Interconnection Facilities. In addition, any price adjustment resulting from cost overruns may not immediately be included in HECO's ECAC until such cost overruns are reviewed in the manner specified herein.

6. HECO is authorized to include the purchased energy charges and related revenue taxes that it incurs under the PPA in HECO's ECAC, to the extent that such costs are not included in HECO's base rates, for the term of the PPA, subject to the terms and conditions provided herein.

7. HECO's request to install a 46kV transmission line above the surface of the ground is approved, pursuant to HRS § 269-27.6(a).

DONE at Honolulu, Hawaii DEC 12 2011.

PUBLIC UTILITIES COMMISSION  
OF THE STATE OF HAWAII

By Hermina Morita  
Hermina Morita, Chair

By John E. Cole  
John E. Cole, Commissioner

By Michael E. Champley  
Michael E. Champley, Commissioner

APPROVED AS TO FORM:

Catherine P. Awakuni  
Catherine P. Awakuni  
Commission Counsel

2011-0224.ps

CERTIFICATE OF SERVICE

The foregoing order was served on the date of filing by mail, postage prepaid, and properly addressed to the following parties:

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