

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF HAWAII

In the Matter of the Application of)
HAWAIIAN ELECTRIC COMPANY, INC.)
For Approval to Commit Funds for)
Item Y00039, Mamala Substation.)
_____)

DOCKET NO. 04-0350

DECISION AND ORDER NO. 21993

RECEIVED
2005 AUG 22 A 8:52
DIV. OF CONSUMER ADVOCACY
DEPT. OF COMMERCE AND
CONSUMER AFFAIRS
STATE OF HAWAII

Filed August 18, 2005
At 9 o'clock A.M.

Brooke K. Kane
for Chief Clerk of the Commission

ATTEST: A True Copy
BROOKE K. KANE
Administrative Director
Public Utilities Commission
State of Hawaii

Brooke K. Kane

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF HAWAII

In the Matter of the Application of)	
HAWAIIAN ELECTRIC COMPANY, INC.)	Docket No. 04-0350
For Approval to Commit Funds for)	Decision and Order No. 21993
Item Y00039, Mamala Substation.)	
_____)	

DECISION AND ORDER

By this Decision and Order, the commission approves the Application of HAWAIIAN ELECTRIC COMPANY, INC. ("HECO"), as amended, to (1) commit funds estimated at \$920,000, including contributions-in-aid-of-construction ("CIAC"), for Item Y00039, Mamala Substation ("Mamala" or "Substation") and (2) to construct the 46 kilovolt ("kV") subtransmission line below the surface of the ground, pursuant to Hawaii Revised Statutes ("HRS") § 269-27.6(a) ("Proposed Project").¹

I.

Background

HECO's requests for commission approvals arising out of the Proposed Project are made pursuant to General Order No. 7, paragraph 2.3(g)(2) of the Standards for Electric Utility Service in the State of Hawaii ("G.O. No. 7") and HRS § 269-27.6(a). Since

¹HECO's application, Exhibits I-VIII and certificate of service, filed on December 1, 2004 ("Application"), as amended on February 17, 2005 and by the subsequent changes to the Application, to be described below.

the initial filing of the Application, the estimated cost for the Proposed Project has been revised, particularly in light of a letter of agreement submitted by HECO and the DIVISION OF CONSUMER ADVOCACY, DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS ("Consumer Advocate", together with HECO, the "Parties") on August 8, 2005 ("Letter of Agreement"). The estimated cost for the Proposed Project is now \$920,000.²

HECO served copies of the Application on the Consumer Advocate. On January 13, 2005, the Consumer Advocate submitted its Preliminary Statement of Position wherein it stated that upon completion of a preliminary review of the Application, it had concerns regarding the following: (1) whether the Proposed Project is reasonable; (2) whether constructing the 46 kV subtransmission line underground, pursuant to HRS § 269-27.6(a), is reasonable; (3) whether the contributions from the United States Air Force ("Air Force") to HECO for the Proposed Project are reasonable; and (4) whether the estimated costs for the Proposed Project are reasonable.

²Pursuant to Decision and Order No. 21002, filed on May 27, 2004, in Docket No. 03-0257 ("Decision and Order No. 21002"), effective July 1, 2004, the G.O. No. 7 expenditures threshold was increased from \$500,000 to \$2.5 million, excluding customer contributions. Originally, the estimated cost for the Proposed Project was over \$2.5 million, requiring HECO to request commission approval, pursuant to Decision and Order No. 21002. As a result of the Letter of Agreement, HECO reduced its estimated cost to \$920,000. Notwithstanding the fact that the estimated cost for the Proposed Project is below the \$2.5 million threshold, the commission will review the Proposed Project under standards of G.O. No. 7 in light of HECO's voluntary request for such review.

On February 2, 2005, the Consumer Advocate submitted information requests ("IRs") to HECO. HECO filed responses to the IRs on February 17, 2005.³

On February 7, 2005, HECO requested an extension of the G.O. No. 7 requirement that the commission render a decision within ninety (90) days of the filing of the Application ("90-day Period"), to April 4, 2005.⁴ HECO's request was granted by the commission by letter dated February 10, 2005. Accordingly, the 90-day Period was extended to April 4, 2005.

By letter dated March 29, 2005, HECO requested an extension of time, to April 29, 2005, in which to file its statement of position in the instant matter. HECO made its request to allow the Consumer Advocate additional time to file its statement of position and for the commission to render its decision in this matter. By Order No. 21728, filed on April 11, 2005, the commission granted HECO's request for a further extension of time, to April 29, 2005.

On April 8, 2005, the Consumer Advocate submitted its statement of position ("Statement of Position") in which it stated that it had concerns with the Proposed Project, and in particular, objects to the inclusion of a portion of the Proposed Project cost in HECO's rate base.

³HECO's response to IR-6, subpart b.1 was filed separately, on March 9, 2005.

⁴Pursuant to G.O. No. 7, paragraph 2.3(g)(2), ninety (90) days after the filing of the Application would be March 1, 2005.

By letter dated and filed on April 28, 2005, HECO requested an extension of time, from April 29, 2005, until June 30, 2005, to allow HECO additional time to respond to the Consumer Advocate's Statement of Position. The commission granted HECO's request, and by Order No. 21863, filed on June 9, 2005, extended the 90-day Period to June 30, 2005.

On June 28, 2005, HECO requested another extension of the 90-day Period, from June 30, 2005, to August 18, 2005 to allow HECO more time to respond to the Consumer Advocate's Statement of Position. The commission granted HECO's request in Order No. 21910, filed on July 8, 2005.

By letter dated August 8, 2005, the Parties informed the commission that they had arrived at a joint agreement regarding the Proposed Project ("Parties' Letter of Agreement"). The Parties further agreed that the recommendations contained in the Parties' Letter of Agreement should replace and supersede the recommendations in the Consumer Advocate's Statement of Position, and that HECO would not be filing a reply to the Statement of Position.⁵

⁵The net estimated project cost of \$920,000 is derived from the Parties' Letter of Agreement.

II.

The Proposed Project

A.

Description

The Air Force requested a service date of July 2006 for the new Substation.⁶ HECO's proposed scope of work includes: (1) the installation of a new low-profile dedicated distribution substation, i.e., the Substation, for the Air Force at the back end of Hickam Air Force Base, which will consist of (a) one (1) 46-11.5 kV, 10/12.5 megavoltampere ("MVA") transformer, (b) a 46 kV breaker, protective relays, and associated equipment, and (c) communications equipment; (2) the installation of one (1) 46 kV underground circuit (approximately 1.5 miles from the existing Hickam (Front End) Substation to the new (Back End) Substation; and (3) the installation of fiber optic telecommunication links between (a) the Puuloa and Hickam Substations and (b) the Hickam and Mamala Substations ("Proposed Project"). With the exception of the telecommunication link between the Puuloa and Hickam Substations, the entire Proposed Project location is situated within Hickam Air Force Base.

HECO proposes to commit funds for the Proposed Project with the issuance of purchase orders for long-lead material items on Item Y00039, the Mamala Substation. The total estimated capital cost for the entire project is \$6,151,744.⁷

⁶See Parties' Letter of Agreement.

⁷See Attachment 2 to the Parties' Letter of Agreement.

The Air Force CIAC includes an in-kind CIAC of \$3,000,000 for ducts and manholes, and a cash CIAC of \$2,231,744.⁸ HECO and the Air Force have executed a Modification of Contract (through the Navy contracting office), dated July 29, 2004, for the Proposed Project. The scope of work is based on HECO's May 14, 2004, proposal letter to the Department of the Navy, Pacific Division.

i.

Substation

The new Mamala Substation, a dedicated distribution substation, will be located in the southwest corner of Hickam Air Force Base, off Hangar Avenue. The Air Force has allowed HECO to use the site at no cost to HECO.

The Substation includes the installation of one (1) 46-11.5 kV, 10/12.5 MVA low sound transformer; a relay control house consisting of one set of primary and backup microprocessor-based line protection relaying and one set of microprocessor-based transformer protection relaying; two (2) sets of 125 VDC battery banks; one set of 46 kV potential transformers;

⁸Pursuant to the Parties' Letter of Agreement, the Air Force has agreed to pay an additional cash CIAC in the amount of approximately \$1.85 million for the Proposed Project. This additional contribution is contingent upon the completion of a Congressional Cost Scope Variation Reprogramming ("CCSVR") action, i.e., congressional appropriation. HECO has determined that it will not proceed with the Proposed Project unless the Air Force obtains approval for the additional \$1.85 million in funds and the funds are contributed to the Proposed Project. The estimated date for the CCSVR completion and execution of the contract modification as a result of the additional \$1.85 million is December 2005 and the estimated in-service date of the Proposed Project is now scheduled for July 2006. See Parties' Letter of Agreement.

one 15 kV metal-clad outdoor switchgear with associated microprocessor-based relay protection equipment; one 46 kV, 1200 amp, circuit breaker; three 46 kV, 1200 amp, group operated disconnect switches; one 48 VDC battery system; 46 kV bus conductors and connectors; Supervisory Control and Data Acquisition ("SCADA")/Remote Terminal Unit equipment; and associated electrical cables and wiring. The Substation will be enclosed with an eight (8) foot wall, drive gates and exterior perimeter lighting.

ii.

46 kV Feeder to the Substation

The new 46 kV feeder to the Mamala Substation will involve the installation of one (1) 46 kV underground circuit (Makalapa 45) from a riser pole near the existing Hickam Substation to the new Substation. The 46 kV underground circuit extension requires the installation of approximately eight thousand (8,000) circuit feet of 46 kV cable, forty-five (45) splices, and two (2) 3-phase 46 kV terminations. The 46 kV circuit extension is required to feed the transformer at the Substation.

The Air Force will be providing the necessary ductlines and manholes for the installation of the 46 kV circuit. This includes the installation of approximately fifteen (15) 6'x14' manholes and eight thousand (8,000) feet of eight (8) 5" ducts. The 46 kV underground circuit extension will be installed in three (3) of the 5" ducts, with one duct to be used as a spare. The remaining four (4) ducts will be reserved for a

future (second) 46 kV feeder to the Substation. The Air Force is paying for the additional ducts, as in-kind CIAC.

iii.

Telecommunication Line Extension to Hickam and Mamala

Two (2) fiber optic lines are required to connect the Substation and Hickam Substation to the existing HECO communication infrastructure. One (1) overhead/underground fiber optic line will connect the Hickam Substation to the Puuloa Substation located at Pearl Harbor. An underground fiber optic line will connect the new Substation to the Hickam Substation.

Fiber connectivity between the Makalapa and Puuloa Substations will be completed in May 2005 as part of the New Kuahua Substation project,⁹ and will allow communications between the Mamala, Hickam, Puuloa and Makalapa Substations. Additional material costs of approximately \$15,000 for cable required to serve the Substation has been prorated from the New Kuahua Substation project to the Proposed Project. The optical fiber system will provide connectivity for the SCADA Remote Termination Units at the Hickam and Mamala Substations, remote line switching capabilities between the Mamala and Hickam Substations and high-speed relay protection circuits serving the three-terminal line connecting the Makalapa-Puuloa-Mamala Substations.

The overhead portion of the Hickam-Puuloa fiber optic link will be installed approximately twenty-five (25) feet above

⁹Approved by the commission in Decision and Order No. 21003, filed on May 27, 2004, in Docket No. 03-0260.

ground and below the existing 46 kV conductors on the existing poles connecting the two (2) substations.

The underground portion of the Hickam-Puuloa Substation fiber optic link will follow the same route as a portion of the 46 kV underground line extension. The underground communications link extension requires the installation of approximately 8,500 feet of underground fiber optic cable. The Air Force will be providing the necessary infrastructure, i.e., ductlines and manholes, for the installation of the communication link between the Hickam and Mamala Substations.

B.

Justification for the Proposed Project

The Air Force needs to upgrade its electrical system at Hickam Air Force base in anticipation of the C-17 cargo plane transport mission and related projects. Presently, Hickam's load is approximately twenty-six (26) MVA. The three existing transformers at the Hickam Substation provide approximately thirty-nine (39) MVA of transformer capacity under normal conditions.¹⁰ By the year 2007, the load for Hickam Air Force Base is estimated to increase by thirteen (13) MVA, to thirty-nine (39) MVA. Therefore, additional transformer capacity is required to serve the expected increase in load at Hickam Air Force Base.

¹⁰The third transformer is for redundancy purposes only.

To meet this anticipated increase in load, the Air Force requested that HECO build a new substation adjacent to the Air Force's Back Switching Station. The Back Switching Station will be upgraded by the Air Force as part of upgrades to the electrical system at Hickam Air Force Base. The Air Force plans to have both the Hickam and Mamala Substations able to carry the entire Hickam base load individually, in the event that either substation is totally disabled.

The Air Force has requested that the 46 kV line and telecommunications feeder to the Substation be installed underground. HECO's Tariff Rule No. 13.D.1 requires that the Air Force contribute the difference between the cost of the underground system and an equivalent overhead system.¹¹ This difference, calculated to be \$442,659, is being paid as cash CIAC by the Air Force.

III.

Consumer Advocate's Position

In light of the Parties' Letter of Agreement, the Consumer Advocate has no remaining concerns regarding the Proposed Project. In particular, the Consumer Advocate does not object to: (1) the commitment of funds for the Proposed Project; (2) the payment of CIAC from the Air Force of approximately \$5,231,744; and (3) the underground placement of the 46 kV feeder.

¹¹HECO's Responses to the Consumer Advocate's IRs, CA-IR-5.

IV.

Findings and Conclusions

Upon careful review of the record, we find the Proposed Project, as amended by the Parties' Letter Agreement, to be reasonable and in the public interest. Currently, the Hickam Air Force Base is served by HECO's Hickam Substation, equipped with three (3) existing transformers.¹² As noted above, the Air Force needs to upgrade the Air Force base's electrical system in order to accommodate the new C-17 cargo plane transport mission and related projects.¹³ Hickam's current load is approximately 26 MVA. By the year 2007, the load is estimated to be 39 MVA. To accommodate this increase in load, the Air Force requested that HECO build a new substation, i.e. the new Mamala Substation. Eventually, the Air Force plans to have both the Hickam Substation and Mamala Substation able to carry the entire Hickam base load individually in the event either substation is disabled. In light of the anticipated future electrical needs of Hickam Air Force Base, we, thus, conclude that HECO's Application to commit funds for Item Y00039, the Mamala Substation, should be approved.

We also find that the construction of the 46 kV subtransmission line below the surface of the ground is consistent with the requirements of HRS § 269-27.6 and that it should be approved. The Air Force has requested that the

¹²One (1) of the three (3) transformers, paid for by the Air Force, is for redundancy purposes. Should one transformer fail, the entire base load can be temporarily served from the available capacity of the remaining two (2) transformers.

¹³Application at 8.

46 kV line be installed underground, and in accordance with HECO's tariff, will be contributing the difference between the cost of the underground system and an equivalent overhead system. This difference is calculated to be \$442,659, and is being paid as a cash CIAC by the Air Force. Accordingly, in light of the above, the commission concludes that HECO's request to construct the 46 kV subtransmission line below the surface of the ground should be approved.

V.

Orders

THE COMMISSION ORDERS:


1. HECO's Application, as amended by the Parties' Letter of Agreement, for the commitment of an estimated \$920,000, excluding customer contributions, is approved, subject to the Air Force providing additional CIAC in the amount of \$1.85 million and provided that no part of the cost of the Proposed Project may be included in HECO's rate base unless and until the Proposed Project has been determined to be used and useful for utility purposes.

2. HECO shall submit a report within sixty (60) days of the completion of the Proposed Project, with an explanation of any deviation of ten (10) per cent or more in the Proposed Project's cost from that estimated in the Application. Failure to submit the report, as requested by this Decision and Order will constitute cause to limit the cost of the Proposed Project, for ratemaking purposes, to that estimated in the instant Application.

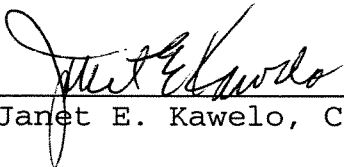
3. HECO's request to construct a 46 kV subtransmission line below the surface of the ground, is approved, pursuant to HRS § 269-27.6(a).

DONE at Honolulu, Hawaii August 18, 2005.


PUBLIC UTILITIES COMMISSION
OF THE STATE OF HAWAII

By 
Carlito P. Caliboso, Chairman

By (EXCUSED)
Wayne H. Kimura, Commissioner

By 
Janet E. Kawelo, Commissioner

APPROVED AS TO FORM:


Benedyne S. Stone
Commission Counsel

04-0350.sl

CERTIFICATE OF SERVICE

I hereby certify that I have this date served a copy of the foregoing Decision and Order No. 21993 upon the following parties, by causing a copy hereof to be mailed, postage prepaid, and properly addressed to each such party.

DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS
DIVISION OF CONSUMER ADVOCACY
P. O. Box 541
Honolulu, HI 96809

WILLIAM A. BONNET
VICE PRESIDENT, GOVERNMENT AND COMMUNITY AFFAIRS
HAWAIIAN ELECTRIC COMPANY, INC.
P. O. Box 2750
Honolulu, HI 96840-0001

DEAN MATSUURA
DIRECTOR OF REGULATORY AFFAIRS
HAWAIIAN ELECTRIC COMPANY, INC.
P. O. Box 2750
Honolulu, HI 96840-0001


for Karen Higashi

DATED: August 18, 2005