

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 in )  
Excess of \$500,000 for )  
Item P0000769, Purchase of 2003 )  
Spare 138-46KV, 48/80MVA )  
Transformer and for Waiver of )  
Paragraph 2.3.g.2 of General Order )  
No. 7. )  
\_\_\_\_\_ )

DOCKET NO. 03-0074

DECISION AND ORDER NO. 20235

Filed June 16, 2003  
At 10:00 o'clock A.M.

Karen Higashi  
Chief Clerk of the Commission

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KAREN HIGASHI  
Chief Clerk, Public Utilities  
Commission, State of Hawaii.

K. Higashi

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Docket No. 03-0074  
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DECISION AND ORDER

I.

By an application filed on March 21, 2003, HAWAIIAN ELECTRIC COMPANY, INC. ("HECO") requests commission approval to commit approximately \$1,281,480 for Item P0000769, Purchase of 2003 Spare 138-46 kilovolt ("kV"), 48/80 megavoltampere ("MVA") Transformer ("proposed project"). HECO's request is made pursuant to paragraph 2.3.g.2 of the commission's General Order No. 7, Standards for Electric Utility Service in the State of Hawaii ("G.O. No. 7").

HECO served copies of the application on the DIVISION OF CONSUMER ADVOCACY, DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS ("Consumer Advocate").

By Order No. 20114, filed on April 7, 2003, the commission granted HECO's request for a waiver of the G.O. No. 7, section 2.3.g.2 requirement to file its application at least

60 days prior to the commencement of construction or commitment for the expenditure of funds.

On April 11, 2003, the Consumer Advocate served HECO with information requests ("IRs"). HECO filed responses to the IRs on April 30 and May 15, 2003.

On May 30, 2003, the Consumer Advocate filed its statement of position ("SOP"). In its SOP, the Consumer Advocate stated that it has no objections to the commission approving HECO's instant application.

## II.

The proposed project involves the purchase of a spare three-phase, 138-46kV, 48/80 MVA transmission transformer, with high voltage winding to have no load tap changer with taps 141.5/138.0/134.5/131.0/127.5kV delta and low voltage winding rated 46kV wye with load tap changer with plus and minus 10 per cent tap range (plus and minus 16, 5/8 per cent steps).

HECO states that the proposed project is required because the existing spare transformer was used to replace the Iwilei A transformer that failed in January 2003. The Iwilei A transformer was 31 years old, and it was determined that it could not be repaired. As a result of the replacement of the Iwilei transformer with the existing spare, HECO does not have a spare to use in the case of another failure of a 138-46kV transformer.

HECO represents that it has 30 138-46kV transformers on its system which are in use. Eight of these transformers are over 40 years old, 10 are between 30-39 years old, three are between

20-29 years old, five are between 10-19 years old, and four are less than 10 years old. The average life expectancy of these transformers is 46 years.

HECO notes that the repair of a failed transformer can take a considerable amount of time. In the case of a transformer that failed in 1988, it took a total of 15 months before it was repaired on the mainland and back in service in Honolulu. A spare transformer would allow HECO to replace a failed transformer in about one week.

HECO also determined in response to an information request by the Consumer Advocate, that compared to the cost of purchasing a new transformer, it would not be cost effective for it to repair the Iwilei A transformer. For example, HECO asserts that the size of the Iwilei A transformer makes it ill-suited to use as a spare transformer in other locations. HECO states that it plans to maintain one spare transformer on hand at any given point in time.

### III.

Upon a careful review of HECO's application, its responses to the Consumer Advocate's IRs, and the Consumer Advocate's SOP, we find the proposed project to be reasonable, and in the public interest. Considering the aging population of existing transformers in use, and the potential major damage to back-up transformers if in use for a long period of time,<sup>1</sup> it would be prudent for HECO to have an available back-up

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<sup>1</sup>See Application at 4.

transformer to reduce the amount of time that HECO is without a spare 138-46kV transformer in the event of a failed transformer. Thus, we conclude that HECO's application to commit funds for a spare transformer should be approved.

#### IV.

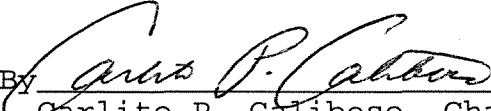
##### THE COMMISSION ORDERS:


1. HECO's application, filed on March 21, 2003, to commit \$1,281,480 for Item P0000769, Purchase of Spare 138-46kV, 48/80MVA Transformer, is approved; provided that no part of the proposed project may be included in HECO's rate base unless and until the spare transformer is in fact purchased, and is used and useful for utility purposes.


2. HECO shall submit a report within 60 days of the completion of the proposed project, with an explanation of any deviation of 10 per cent or more in the 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 project, for ratemaking purposes, to that estimated in the application.

DONE at Honolulu, Hawaii this 16th day of June, 2003.

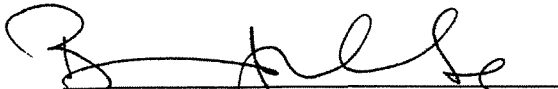
PUBLIC UTILITIES COMMISSION  
OF THE STATE OF HAWAII

By   
Carlito P. Caliboso, Chairman

By   
Wayne H. Kimura, Commissioner

By   
Janet E. Kawelo, Commissioner

APPROVED AS TO FORM:

  
Benedyne S. Stone  
Commission Counsel

03-0074.eh

CERTIFICATE OF SERVICE

I hereby certify that I have this date served a copy of the foregoing Decision and Order No. 20235 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  
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LORIE ANN NAGATA  
TREASURER  
HAWAIIAN ELECTRIC COMPANY, INC.  
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Honolulu, HI 96840-0001

  
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Karen Higashi

DATED: June 16, 2003