

Commissioner, State of
H. Digest.

In the Matter of the Application of)
HAWAIIAN ELECTRIC COMPANY, INC.)
For Approval to Commit Funds in)
Excess of \$500,000 for)
Item P0000190, Waikiki)
Rehabilitation Program, Project 1.)

Decision and Order No. 21918

By this Decision and Order, the commission approves:

(1) HAWAIIAN ELECTRIC COMPANY, INC.'s ("HECO" or "Applicant") request to commit funds in excess of \$500,000 for the Waikiki Rehabilitation Program, Project 1 (Item P0000190) ("Project 1"); and (2) the May 11, 2005 Agreement between HECO and the DIVISION OF CONSUMER ADVOCACY, DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS ("Consumer Advocate") in its entirety and adopts and incorporates it as part of this Decision and Order.

On July 5, 2001, HECO filed an Application for approval to commit funds in excess of \$500,000 for Project 1 ("Application"). Applicant seeks approval, pursuant to Paragraph 2.3.g.2 of General Order No. 7, Standards for Electric Utility Service in the State of Hawaii ("G.O. No. 7"), to commit funds

and to commence construction that is expected to cost in excess of \$500,000.¹

HECO served the Consumer Advocate with copies of the Application (collectively, HECO and the Consumer Advocate hereinafter referred to as "Parties").² On August 15, 2001, the Consumer Advocate served information requests upon HECO. On August 21, 2001, the Consumer Advocate filed its second submission of information requests upon HECO. On September 1, 2001, HECO filed its responses to the Consumer Advocate's information requests. On September 21, 2001, HECO submitted a letter waiving the G.O. No. 7 Paragraph 2.3.g.2 requirement that the commission "render a decision and order within 90 days of the filing by the utility."³

On May 2, 2002, the Consumer Advocate filed its Statement of Position indicating that it did not object to the approval of the Application, assuming the commission adopts the Consumer Advocate's reporting requirements.

¹The current Application filed on July 5, 2001, was submitted prior to Decision and Order No. 21002, filed on May 27, 2004, in Docket No. 03-0257, in which the commission ordered effective July 1, 2004, Paragraph 2.3.g.2 of General Order No. 7, as applied to HECO be modified by raising its minimum threshold of \$500,000 to \$2.5 million excluding customer contributions.

²Pursuant to Hawaii Administrative Rules ("HAR") § 6-61-62, the Consumer Advocate is an *ex officio* party to any proceeding before the commission. On July 25, 2001, LIFE OF THE LAND timely filed a motion to intervene, pursuant to HAR § 6-61-55, which was denied by the commission on August 16, 2001. Order No. 18746, filed on August 16, 2001.

³The Application in this proceeding was filed on July 5, 2001. Pursuant to paragraph 2.3.g.2, the 90th day after the filing of the Application was October 3, 2001.

By letter dated August 22, 2002 and filed on August 23, 2002, HECO and the Consumer Advocate informed the commission of their agreement with respect to the Consumer Advocate's proposed reporting requirements as recommended in its May 2, 2002 Statement of Position ("August 22, 2002 Agreement"). Specifically, the Parties' August 22, 2002 Agreement indicated that, in lieu of the reporting requirements, HECO has agreed to, among other things: (1) allow representative(s) of the Consumer Advocate to view the removal of the solid dielectric (either high molecular weight polyethylene or crosslinked polyethylene) insulated, concentric neutral (PEICN)12 kilovolt ("kV") cables; (2) send sections of the removed PEICN cables to a laboratory for testing if desired by the Consumer Advocate's representative at the time of the cable removals, and provide the test results to the commission and the Consumer Advocate; and (3) include in the applications for Projects 2 and 3 of the Waikiki Rehabilitation Program, if necessary, a quantification of the effectiveness of the cable replacement in Project 1 of the Waikiki Rehabilitation Program, as it relates to cable failures and outages experienced in the Project 1 area prior to and subsequent to the replacement cables in the Project 1 area.

On December 11, 2002, the commission issued information requests upon HECO. On May 23, 2003, HECO filed its response to the commission's information requests. On May 23, 2003, HECO also submitted a letter: (1) requesting that the commission defer issuing a decision until HECO completes its investigation regarding the condition of the underground cables; and

(2) submitting the results from "live" testing conducted by DTE Energy Technologies Cablewise Services ("DTE").

By letter dated October 7, 2004, HECO submitted results from laboratory testing conducted by the National Electric Energy Testing Research & Application Center ("NEETRAC"). By letter dated May 27, 2004, HECO filed its response to the Consumer Advocate's informal information requests. By letter dated September 3, 2004, HECO provided DTE's response to the NEETRAC lab test results and NEETRAC's response to DTE's comments. On March 9, 2005, HECO filed its response to additional informal information requests from the Consumer Advocate.

By letter dated and filed on May 11, 2005, HECO and the Consumer Advocate submitted their revised agreement with respect to the Consumer Advocate's proposed reporting requirements as recommended in its Statement of Position filed on May 2, 2002 ("May 11, 2005 Agreement"). In addition, HECO provided an update and revision to the project scope, cost, and schedule.⁴

⁴Due to these revisions, the commission will treat the May 11, 2005 Agreement as an amendment to the July 5, 2001 Application.

II.

A.

Waikiki Rehabilitation Program Project 1

1.

Revised Project 1 Scope

The original scope of Project 1 of the Waikiki Rehabilitation Program called for the replacement of: (1) 12,400 circuit feet of unjacketed, solid dielectric (either high molecular weight polyethylene or cross linked polyethylene) insulated, concentric neutral (PEICN) 12 kV cables with new jacketed, solid dielectric, tree retardant, cross linked polyethylene insulated, concentric neutral with a polyethylene jacket (PEICN) 15 kV cables, (2) 151 splices on four (4) 12.47 kV underground primary circuits, and (3) nine (9) outdated transformer vaults with new HECO standard dead-front padmounted transformer vaults, including new transformers.⁵

The PEICN cables that are being replaced are part of the Ala Moana, Ilikai, Kalia and Makaloa 12.47 kV circuits that serve Waikiki. The splice replacements also involve the same four 12.47 kV circuits.⁶

However, HECO represents that since the Application was filed in July 2001, there have been several failures in the Project 1 area. As these failures occurred, the damaged sections

⁵The existing transformers will either be refurbished and reused at different locations or scrapped.

⁶The paper insulated, lead covered (PILC) cables for these four circuits are not planned to be replaced at this time.

of unjacketed PEICN cables were removed and replaced. HECO states that the unjacketed PEICN cables that have already been replaced will not be changed out as part of the proposed Project 1. However, HECO states that its planned manhole inspections, as part of the Project 1, may reveal additional unjacketed PEICN cables on these four (4) circuits or on other circuits in the same manholes that need to be replaced. If upon inspection, additional unjacketed PEICN cables are discovered⁷, HECO's position is that it is better to replace these additional PEICN cables at the same time in order to minimize disruptions to our customers and the general public. HECO reasons that a planned cable replacement of a deteriorating cable is less disruptive than a cable replacement due to an outage. For these reasons, HECO notes that the scope of Project 1 may increase or decrease based on actual field conditions, and if so, it will identify the amount of unjacketed PEICN cables it has actually replaced in Project 1 in its cost report.

HECO states that the conversion of the Ala Wai Yacht Harbor area from 4 kV to 12 kV is also an expansion to the original scope of Project 1.⁸ The original scope of work initially included only cable and transformer replacements within the Ala Wai Yacht Harbor area, and leaving the system energized at 4 kV. HECO claims that the conversion from 4 kV to 12 kV in

⁷Currently, HECO's maps do not identify all the unjacketed PEICN cables in the area. Cables listed as PEICN could be the jacketed or unjacketed type.

⁸HECO first informed the Commission of this scope change in its response to PUC-IR-6, filed by letter dated May 23, 2003.

the Ala Wai Yacht Harbor area is required because the existing 12 kV to 4 kV step-down transformer is overloaded.

New loads in the Ala Wai Yacht Harbor area have also placed additional demands on the existing 4 kV system. HECO asserts that the conversion of the Ala Wai Yacht Harbor area from 4 kV to 12 kV will have the following benefits:

- The capacity will increase threefold and will provide for current requirements and future load growth.
- The visual impact of HECO's equipment will be improved. In addition to replacing deteriorating cables, seven deteriorating corten shell transformers will be replaced with seven smaller padmounted transformers. Also, two existing switching cabinets will be replaced by a single padmounted switch.
- HECO is systematically upgrading its 4 kV system with 12 kV equipment as purchasing of 4 kV spare parts and equipment is becoming more difficult as most manufacturers are phasing out this voltage class due to low demand.

In an effort to minimize future disruption to traffic and businesses in the area, HECO states that the additional work will be done in conjunction with this Project 1 in order to increase the reliability of the electrical system in Waikiki. Ducts will be sealed throughout Waikiki in order to help prevent water from accumulating in the handholes and manholes. Additionally, splices for PILC cables in the handholes and manholes will be covered with a polymeric, heat-shrink sleeve. The installation and material costs for the duct seals and splice sleeves will be performed under a separate operation and maintenance project and, therefore, will not be part of this proposed project.

2.

Revised Project 1 Schedule

HECO represents that construction relating to Project 1, as represented in this docket, is now expected to commence in July 2005 and be completed in approximately sixteen (16) months.

3.

Revised Project 1 Cost Estimate

The revised Project 1 has a total estimated cost of \$1,618,602.⁹ This is an increase of approximately \$540,000 over the initial Application estimate of \$1,075,316. HECO states that the primary reason for the increased cost is a refinement due to further engineering.

HECO states that the estimated cost for outside services increased approximately \$412,000 over the initial Application estimate due to: (1) the prior and proposed cable testing, and (2) revised costs for (a) pumping water from manholes, (b) transformer replacements, and (3) police and traffic control.

HECO further states that at the time the cost estimate for the Application was prepared, cable testing was not considered. The additional cost for the DTE and NEETRAC cable testing already completed and for future NEETRAC testing is estimated at approximately \$50,000.

⁹See, revised Exhibit III attached to the May 11, 2005 Agreement.

In addition, HECO states that the initial Application cost estimate substantially underestimated the cost for pumping water from manholes in Waikiki. Although HECO has a permit to pump water directly into a storm drain, this can only be done if two (2) conditions are met: (1) the water must be free from petroleum, sulfides, nitrates and other chemicals, and (2) drain hoses can not run across any roadways. HECO's further analysis confirmed that much of the water from these manholes will not be able to be directly pumped into a storm drain, by HECO, and therefore will need to be pumped into a truck, by a contractor, to be removed offsite and properly disposed of. This increased outside services costs by approximately \$221,000, and also resulted in a slight reduction in HECO labor costs.

The cost to construct the infrastructure for the corten shell transformers has also increased by approximately \$89,000. The initial Application estimate assumed that HECO would do this work, however, the revised estimate now assumes this work would be done by a contractor, resulting in an increase in outside services and a corresponding decrease in HECO labor.

Police and traffic control costs also increased by approximately \$52,000 in order to minimize the disruption to vehicular and pedestrian traffic in Waikiki and the impact on businesses in the area. HECO states that this item was underestimated in the initial Application cost estimate.

HECO labor costs have further increased by approximately \$111,000, primarily due to the current higher

estimate for On-costs.¹⁰ The higher On-costs offset the lower HECO labor costs described above.

B.

Revised Agreement Regarding Implementation of the Proposed
Waikiki Rehabilitation Projects.

In its May 11, 2005 Agreement, HECO and the Consumer Advocate agree that HECO will review the cable failure data for the Project 1 area for six (6) months after the Project 1 is completed. HECO will provide the Consumer Advocate and the commission with the Project 1 area circuit failure information by cause (i.e., PEICN cable, PEICN joint, PILC cable, PILC joint). If the cable failure data does not show a "marked" improvement after six (6) months, then HECO will re-evaluate the data after an additional six (6) months (i.e., one year total). The purpose of expanding the evaluation is to assess whether seasonal effects exist, and then provide the one (1) year of cable failure data to the Consumer Advocate and the Commission.

In addition, HECO currently estimates that the capital costs for the Waikiki Rehabilitation Program, Project 2 and 3 projects will be each under \$2.5 million, and that applications seeking commission approval for the capital expenditures for Project 2 and 3 are not anticipated to be required. Notwithstanding that fact, HECO agrees to work with the

¹⁰HECO states that the Consumer Advocate's concerns regarding on-cost for this project can be addressed in the rate proceeding following the in-service date for this project.

Consumer Advocate to try to address its concerns regarding the proposed implementation of the Project 2 and Project 3 before proceeding with Projects 2 and 3.

III.

Discussion

Based on our review, the commission finds that the proposed Project 1 of the Waikiki Rehabilitation Program, as revised by the May 11, 2005 Agreement, to be reasonable and consistent with the public interest. Our findings are primarily based on HECO's representations that (1) the condition of the primary distribution cable is deteriorating which may eventually mean that even the standby circuit will not operate reliably, affecting electrical service to customers in the Waikiki area; (2) the estimated average age of the cables in the Project 1 area has exceeded its estimated service life; and (3) the replacement PEICN cables proposed in the project should be able to endure the Waikiki environment better as the new PEICN cables have a jacket providing better protection against conditions such as being submerged in water, which should improve reliability.

The commission also finds that the May 11, 2005, Agreement, between HECO and the Consumer Advocate, to be reasonable.

Based on the foregoing, the commission concludes that HECO's request to commit funds in excess of \$500,000 for the Project 1 and the May 11, 2005 Agreement between HECO and the

Consumer Advocate, should be approved in its entirety, and adopted and incorporated as part of this Decision and Order.

IV.

Orders

THE COMMISSION ORDERS:

1. HECO's Application, filed on July 5, 2001, as amended on May 11, 2005, to commit funds in excess of \$500,000 for the Waikiki Rehabilitation Program, Project 1 (Item P0000190) is approved, 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 completed, and the proposed project is used and useful for utility purposes.

2. The Parties' May 11, 2005 Agreement is approved in its entirety, and adopted and incorporated as part of this Decision and Order. Unless otherwise ordered and consistent with the May 11, 2005 Agreement, HECO shall inform the commission and Consumer Advocate in writing the status of its review of the cable failure data for the Project 1 area within seven (7) months after Project 1 is completed. In addition, HECO and the Consumer Advocate shall file with the Commission a report on the resolution of the Consumer Advocate's concerns, before proceeding with subsequent phases of the Waikiki cable conversion projects.

3. HECO shall submit a report within sixty (60) days of the project's commercial operation, with an explanation of any

deviation of ten (10) per cent or more of the projected costs for the proposed project. Failure to submit the report as required by this Decision and Order, will constitute cause to limit the cost of the project, for ratemaking purposes, to that estimated in the Application, as amended.

4. HECO shall serve two (2) copies of the reports and information described in paragraph 2, above, upon the Consumer Advocate. Failure to adhere to our orders constitutes cause for the commission to void this decision and order, and may, result in further regulatory actions as authorized by law.

DONE at Honolulu, Hawaii JUL 15 2005.

PUBLIC UTILITIES COMMISSION
OF THE STATE OF HAWAII

By Carlito P. Caliboso
Carlito P. Caliboso, Chairman

By Wayne H. Kimura
Wayne H. Kimura, Commissioner

APPROVED AS TO FORM:

By Janet E. Kawelo
Janet E. Kawelo, Commissioner

Kevin M. Katsura
Kevin M. Katsura
Commission Counsel

01-0228.eh

CERTIFICATE OF SERVICE

I hereby certify that I have this date served a copy of the foregoing Decision and Order No. 21918 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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Karen Higashi

DATED: JUL 15 2005