

REBUTTAL TESTIMONY OF
ROBERT ISLER

PROJECT MANAGER
POWER SUPPLY ENGINEERING
HAWAIIAN ELECTRIC COMPANY, INC.

Subject: Use of Biodiesel In CIP Unit 1

1 with the Consumer Advocate that was approved by the Commission in approving
2 the installation of the new generating unit. In accordance with the air permit, CIP
3 Unit 1 will be commissioned firing petroleum diesel (i.e., No. 2 oil) in mid-2009.
4 Tests will subsequently be performed to characterize the performance and air
5 emissions firing biodiesel. The test results will be used as a basis to modify the
6 air permit to allow for continuous operation firing 100% biodiesel. Once the
7 modified air permit is issued, CIP Unit 1 will be operated firing biodiesel

8 Q. What did the Commission find with respect to HECO's commitment to use
9 biofuels in the new unit?

10 A. The Commission found that commitment to be reasonable and consistent with
11 State policy to reduce Hawaii's dependence on imported fossil fuels and
12 encourage sustainability through economic diversification, export expansion, and
13 import substitution:

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15 As an island State without oil resources, Hawaii has had to rely on imported
16 oil, contributing to an undesirable "large imbalance between the amount of
17 goods and services exported from Hawaii in comparison to the amount of
18 goods and services imported to Hawaii."

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20 Accordingly, by Act 272, 2001 Session Laws of Hawaii
21 ("Act 272"), Hawaii's RPS Law was enacted with the purpose of
22 "lessen[ing] Hawaii's dependence on imported oil[.]" Likewise, in
23 modifying Act 272, the Legislature, in Act 95, intended to, "decrease
24 Hawaii's need to import large amounts of oil, and increase import
25 substitution, economic efficiency, and productivity, by increasing the
26 use and development of Hawaii's renewable energy resources through
27 a partnership between the State and the private sector." Importantly,
28 the RPS law specifically defines renewable energy as including
29 "biofuels."

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31 (D&O No. 23457 (May 23, 2007), Docket No. 05-0145, pages 45-46.)

32 Thus, the Commission found that State law explicitly supports HECO's

1 commitment to use biofuels for the Project. The Commission further agreed with
2 HECO and the Consumer Advocate that the Project supports the State's goal of
3 encouraging development of local agriculture, in that HECO expects the Project to
4 provide a stable market for locally grown and produced biofuels. The
5 Commission also found that using biofuels, which may eventually be locally
6 grown and produced, is preferable to burning fossil fuel for the CIP CT-1 Project,
7 and will advance the State's policies of reducing the State's dependence on fossil
8 fuels and diversifying the State's economy.

9 Q. Is it technically feasible to use biodiesel in CIP Unit 1 that is blended with 0.0% to
10 0.2% diesel?

11 A. Yes. The combustion turbine will be able to use biodiesel that has between 0.0%
12 and 0.2% diesel blended with it.

13 Q. What will be the maximum power output of CIP Unit 1 power output using
14 biodiesel versus #2 diesel?

15 A. The maximum power output of CIP Unit 1 is anticipated to be the same, whether
16 using 100% biodiesel, #2 diesel, or any blends of the two fuels.

17 Q. Does this conclude your testimony?

18 A. Yes, it does.

HAWAIIAN ELECTRIC COMPANY INC.

ROBERT C. ISLER, P.E.

EDUCATIONAL BACKGROUND AND EXPERIENCE

Business Address: Hawaiian Electric Company, Inc.
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Position: Project Manager
Power Supply Engineering Department

Education: Bachelor of Science in Mechanical Engineering
Virginia Polytechnic Institute & State University, 1987

Other Qualifications: Licensed Professional Engineer
State of Hawaii, Mechanical Branch - 1998

Experience: HAWAIIAN ELECTRIC COMPANY, INC.

2000 - present
Project Manager
Power Supply Engineering Department (post September 2004)
Planning & Engineering Department,
Hawaiian Electric Company, Inc.

1998 - 2000
Mechanical Engineer II, Planning & Engineering Department,
Hawaiian Electric Company, Inc.

1993 - 1998
Designer II, Planning & Engineering Department
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OTHER

1987 - 1992
Submarine Officer, United States Navy