

COUNCIL OF THE COUNTY OF MAUI

# ENERGY AND ECONOMIC DEVELOPMENT COMMITTEE

September 21, 2004

Committee  
Report No.

04-163

Honorable Chair and Members  
of the County Council  
County of Maui  
Wailuku, Maui, Hawaii

Chair and Members:

Your Energy and Economic Development Committee, having met on August 30, 2004, makes reference to County Communication No. 03-51, from Councilmember Charmaine Tavares, relating to the matter of wind energy. The communication transmits an article from the January 27, 2003 issue of *The Maui News*, entitled "Proposed Maui wind project moves forward".

By correspondence dated August 25, 2004, Councilmember Jo Anne Johnson transmitted an article from the August 21, 2004 issue of *The Maui News*, entitled "New wind turbine a Russia-U.S. venture".

At its meeting, your Committee met with Don Ainsworth, Program Coordinator for the Sustainable Technologies Program at Maui Community College (MCC); and Mike Gresham, Project Manager, Kaheawa Wind Power, LLC.

Your Committee received testimony from two people. The first person testified in support of both the Kaheawa Pastures project and the MCC wind project, and also provided a copy of correspondence dated August 24, 2004, from the President of Maui Tomorrow Foundation, Inc. to UPC Wind Partners, supporting the Kaheawa Pastures Wind Energy Generation Facility project. The second person, representing Maui Electric Company, Ltd. (MECO), testified that the power generated by wind farms is considered "as available energy" and is not a factor in their capacity planning and determining the need for expanding power plant facilities.

Mr. Ainsworth presented an overview of a wind energy project. He stated that the project involves constructing a wind turbine at MCC in partnership with Hawaii Pacific Wind, LLC, and provides both educational and financial opportunities for MCC.

COUNCIL OF THE COUNTY OF MAUI

# ENERGY AND ECONOMIC DEVELOPMENT COMMITTEE

September 21, 2004  
Page 2

Committee  
Report No. 04-163

Mr. Ainsworth stated that in Fiscal Year 2003-2004, MCC spent over \$1 million for approximately 1.5 million kilowatt hours of electricity. He stated that this project is expected to generate 660-kilowatt hours, which represents 40 to 50 percent of MCC's energy needs.

Mr. Ainsworth explained that their wind studies showed that the winds are strongest during the hottest part of the day, which corresponds with MCC's peak demand for electricity. He also stated that any excess electricity generated by the project would be sold to MECO through their electrical grid.

Mr. Ainsworth informed your Committee that the project involves the construction of a 150-foot high wind turbine with blades that will reach 240 feet high. A system of hydraulics allows for all four of the generators to be located on the ground. He stated that there have been four public meetings to date, and they are required to obtain a Special Management Area (SMA) permit. He also stated that construction on the foundation should start within a few months.

Mr. Ainsworth exhibited a video that simulated what the proposed wind turbine would look like at the MCC campus. He also exhibited a video of a similar wind turbine operating in Canada.

Your Committee expressed concern about the visual impact of the wind turbine on view planes. Mr. Ainsworth explained that through the course of the four public hearings on this project, the complaints on the visual impacts were outweighed by the educational and environmental aspects of the project.

Your Committee received a computer-generated slideshow on the Kaheawa Pastures Wind Energy Generation Facility, from Mike Gresham, President of Makani Nui Associates, LLC, and Michele McLean, Land Use Planner for Smith Development.

Mr. Gresham explained that wind energy is renewable, clean, abundant, increasingly accessible and has minimal impact on the environment. Yet only 1 percent of electricity in the United States is generated from wind.

Mr. Gresham stated that the Kaheawa Pastures project consists of 20 General Electric 1.5 megawatt wind turbines arranged in a single "articulated row" that will connect to MECO's transmission system. The project will generate

COUNCIL OF THE COUNTY OF MAUI  
**ENERGY AND ECONOMIC  
DEVELOPMENT COMMITTEE**

September 21, 2004  
Page 3

Committee  
Report No. 04-163

enough electricity to power 11,000 average-sized Maui homes and eliminate the use of 155,600 barrels of oil annually.

Mr. Gresham said that the project is located above the Pali in Ukumehame, Lahaina, from the 1,600 feet level to the 3,000 feet level, and is planned to be operational by late 2005. He stated that the location of the facility allows for minimal visual impact.

Mr. Gresham stated that the project received a Conservation District Use Application permit (CDUA) from the State Board of Land and Natural Resources in January 2003. He also stated that the permit has 45 strict conditions requiring a habitat conservation plan, archaeological surveys, erosion control, SMA review, environmental assessment, wild land fire contingency plan, and ongoing monitoring and management plans.

Ms. McLean reported that several public hearings were held on the Kaheawa Pastures project in 1999 when the environmental impact statement was developed. She stated that due to a recent change in the wind turbine design, the State Board of Land and Natural Resources is requiring an environmental assessment.

Your Committee asked whether the power generated by the project is considered "firm" power. Mr. Gresham explained that wind energy is considered "as available" power, rather than "firm" power, because the wind blows at variable speeds. He also explained that as the public utility gains experience with the power generated by the facility, they will get a better understanding of its reliability.

Your Committee voted to recommend filing of the communication.

Your Energy and Economic Development Committee **RECOMMENDS** that County Communication No. 03-51 be FILED.

Adoption of this report is respectfully requested.

COUNCIL OF THE COUNTY OF MAUI  
**ENERGY AND ECONOMIC  
DEVELOPMENT COMMITTEE**

September 21, 2004  
Page 4

Committee  
Report No. 04-163

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