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For Immediate Release

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Bermuda looks to Hawaii Island energy plan recommendations as a model

KAMUELA, Hawaii—October 10, 2008—Searching for greater energy efficiency, the island nation of Bermuda looked to Hawaii Island for solutions, specifically to the Hawaii Island Energy Sustainability Plan Recommendations.

Bermuda's Department of Energy recently contacted the team that developed the plan recommendations to learn more about their work. Hailed as a model for the planet, the recommendations were developed for the County of Hawaii by The Kohala Center in collaboration with the County of Hawaii's Department of Research and Development and the Yale School of Forestry and Environmental Studies. The plan recommendations provide the basis for reduced dependence on imported petroleum products and for greater efficiency and renewable energy.

"We've long understood that the challenges we face as an island society can actually be very valuable assets; that is, they bring together the very best and the brightest, talented individuals who make a difference here and elsewhere," said Matt Hamabata, executive director of The Kohala Center.

"Challenges such as skyrocketing prices for utilities and transportation, our dependence on fossil fuel inputs, and security issues due to the fact that we are the world's most isolated land mass actually make us a place where solutions for global environmental challenges MUST be developed and delivered," Hamabata said. "It brings together the very best in local and global leadership—like Jane Testa, who heads the Department of Research and Development at the County; like Pete Hoffman, County Council Chair; Bob Arrigoni, the outgoing County Energy Specialist; and the Industrial Ecology Program at Yale. Together, they worked to create the County's Energy Sustainability Plan Recommendations, which is a model for the planet."

Bermuda, with a population of 62,000, is seeking to identify opportunities and incentives to enhance and maximize energy self-sufficiency and conservation programs, said W. Allan Bean, consultant to Bermuda's Department of Energy. Bermuda looks to employ renewable and alternative energy sources and the use of biofuels built within island facilities; and to create key data sources and develop a roadmap for energy sustainability and utility sustainability.

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Whereas Hawaii Island is 70 percent dependent on imported fossil fuel, Bermuda is 98 percent dependent, according to Bean. Its electric rates are among the highest in the world. Like Hawaii, due to its reliance on petroleum-based fuels, Bermuda is vulnerable to the volatility of the global oil markets and spends more than $100 million out of the local economy each year on petroleum-based fuels. (Note: The Bermuda dollar is the equivalent on the US dollar.) Hawaii County would spend an estimated $750 million on energy in 2007.

A team from the Yale School of Forestry and Environmental Studies will travel to Bermuda to talk about how they worked with experts from the County of Hawaii and other island experts to develop the plan and to assess Bermuda's needs.

The Executive Summary of the plan recommendations can be viewed at www.kohalacenter.org/research.html.

The Kohala Center is an independent, not-for-profit center for research and education *about* and *for* environment. By respectfully engaging Hawaii Island as the world's most vibrant classroom and laboratory for humanity, The Kohala Center builds teaching and research programs that enhance island environments, serve island communities, and advance the work of the academy. The Kohala Center operates in partnership with local, national, and international research and educational institutions. Among its current project partners are Hawaii Community College, the Edith Kanaka'ole Foundation, The Andrew W. Mellon Foundation, Kamehameha Schools, the University of Hawaii, Brown University, Cornell University, the Redlands Institute, the School of Forestry and Environmental Studies at Yale University, the University of California at Santa Barbara, and the National Oceanic and Atmospheric Administration, among many others. http://www.kohalacenter.org

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Hawai'i County Energy Sustainability Plan Recommendations

Fact Sheet

The Energy Plan

The purpose of the Hawai'i County Energy Sustainability Plan Recommendations is to form the basis for a roadmap that transitions the County of Hawai'i from fossil-fuel dependency to greater energy efficiency and renewable energy. The overriding tenet of the recommendations are that they be grounded in "off the shelf" technology and processes available today. The Plan provides recommendations for each energy constituency on the Island including residential and commercial structures, the utilities including power and water, and the transportation sector. The plan maximizes energy self-sufficiency on the Island, with participation by County and State government, consumers, HELCO, Public Utilities Commission, the building and construction industry, and the commercial sector. The executive summary of the October 2007 Hawai'i County Energy Sustainability Plan is available in "Latest News" at www.kohalacenter.org.

Research was conducted by Yale School of Forestry and Environmental Studies in collaboration with the Hawai'i County Department of Research and Development and prepared for and funded by the Hawai'i County Council. The Kohala Center organized the research effort.

Whereas each recommendation may contribute a modest improvement on its own, the aggregate impact would be an increase in energy sustainability by reducing dependency on fossil fuels to 31% of Hawaii Island's energy needs (excluding jet fuel) by 2030.

Hawai'i County spent an estimated $750 million in 2007 on fossil fuel. This was evenly split between electricity generation and transportation energy. The opportunities for savings are significant. For instance, a reduction of 5% would leave $37.5 million in our local economy. A reduction of 10% would leave $75 million in our local economy. With the multiplier effect of retaining these funds within the County, the economic benefits would be actually much higher. Note that these 2007 figures were calculated with 2007 prices of oil. As we know, the price of oil is about 25% more in July 2008 than it was in July 2007, so the benefits of reducing our Island's dependence on fossil fuel have increased as well.

Hawai'i County has no County-funded personnel assigned exclusively to the management of energy issues. In order to achieve the County goals for efficiency and renewable generation, the Energy Sustainability Plan recommends that the County create three full-time positions:

1. A green building expert
2. An energy policy analyst
3. An energy and sustainability advisor to the entire County administration.

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The current energy reality

Approximately 70% of Hawai‘i Island’s electricity generation and virtually all of transportation needs come from imported petroleum products.

High petroleum prices are a main factor driving up Hawai‘i County’s electricity price, which is more than three times the national average.

Importing petroleum-based fuels sends hundreds of millions of dollars out of the local economy each year. The single largest economic opportunity for the Hawai‘i Island economy is to reverse this trade imbalance and keep these dollars in the economy.

The Plan’s energy efficiency projections

Ten percent of the roughly 65,000 residences currently have solar water heaters. If 3.5% of existing homes add a solar water heater every year until 2030, the energy equivalent of 12 million gallons of diesel will be saved annually.

Through implementing the Plan’s construction efficiency measures for new homes, the possible 60% reduction in energy consumption will save the energy equivalent of 9 million gallons of diesel per year by 2030.

If 2,000 homes per year switch to compact fluorescent light bulbs to a benchmark of 32,000 homes, the annual primary energy demand reduction will be 2 million gallons of diesel equivalent.

Commercial and public sectors use 36% of the total electric demand. If a 1.5% annual decrease in energy demand is achieved by 2030, the annual efficiency gains will be 16 million gallons of diesel equivalent per year in 2030, or a 21% reduction.

Increasing the average fuel efficiency of cars and light trucks from 23 to 30 miles per gallon can reduce transportation fuel use by 18 million gallons of diesel per year.

Increasing public transportation ridership by 20% annually through 2015, followed by annual growth of 5% through 2030, the energy savings will be 18.4 million gallons of diesel per year.

If the “plug-in” vehicle technology proves viable and if 40,000 cars or 15% of the Island vehicles are plug-in electric hybrids by 2030, the savings would be 9 million gallons of gasoline a year.

A water conservation policy can reduce water demand by 20%, and the primary energy savings will be 2 million gallons of diesel equivalent per year by 2030.

Electric transmission line upgrades will reduce generation fuel by 14 million gallons of diesel equivalent per year by 2030.

If the utility implements the renewable energy strategy outlined in the Plan, by 2030 renewable electricity generation will be double, eliminating the need for 94 million gallons of diesel equivalent per year.