TOWN OF
NANTUCKET
ENERGY OFFICE

Nantucket Energy Office
16 Broad Street
Nantucket, MA 02554
www.ACKEnergy.org

FOR IMMEDIATE RELEASE—JULY 12, 2012

Wind and Wave Studies Planned for Madaket

NANTUCKET **—**The Town of Nantucket has granted permission to the University of Massachusetts-Dartmouth (UMASS) and Woods Hole Oceanographic Institution (WHOI) to perform two experiments over the course of one year at the Madaket Land Trust beach area at Chicago Street.

The projects are sponsored by the New England Marine Renewable Energy Center at UMASS-Dartmouth and the Massachusetts Clean Energy Center. The US Department of Energy (DOE) is providing additional sponsorship for the deployment costs and electricity generation testing. UMASS will be conducting the environmental studies associated with the wave energy device and its effects on sediment transport and beach erosion.

Interested residents are encouraged to attend an **informational forum** on **Monday, July 23rd from 4:30-6:00pm** at the Public Safety Facility Community Room (4 Fairgrounds Road). Representatives from WHOI, UMASS and the Nantucket Planning Office will be present to explain the project and answer any questions about the proposed research tests:

Wave Generator Demonstration
A short-term (4-6 week) deployment of a wave energy device will provide wind, wave, and surface current data for general public use and allow Boston-based Resolute Marine Energy (RME) an opportunity to deploy and test a single wave energy conversion device.

The device is approximately 8 feet long and has been tested previously in a federal wave tank research center in New Jersey and at a pre-permitted US Army Corps of Engineer test site along the Outer Banks of North Carolina. The proposed project at Madaket would be the first test to directly measure the potential for electrical generation in the field. The device will be placed below the water level in about 25 feet of water, ~800-1000 feet from shore. A buried conduit with an insulated cable would be run from the device to a nearby shed. In the water, the conduit will be set into the sand with a plow blade. From the low tide mark onshore to the shed, the conduit will be in a 2' to 4' deep, hand dug trench. The project commencement date depends on

satisfactory completion of the Town and State permit approval process, with the tests starting as early as September 2012.

A temporary project shed for housing data storage equipment will be located on a Town-owned parcel of land at the end of Chicago Street, adjacent to the Madaket Land Trust beach parking lot near the end of Madaket Road. The shed will measure approximately 8' x 12' and will be placed on temporary foundation piers. A nearby existing transformer will provide the electrical service.

Radar Mapping of Wind/Wave Climate
As part of this project, the Woods Hole Oceanographic Institution will observe and record the offshore winds, waves, and surface currents. WHOI researchers propose to install a temporary, high-frequency radar device that will be connected to the research equipment shed via a buried cable. The radar system is approximately 21' tall and is similar to two systems deployed on Martha's Vineyard in the summer of 2010: one at Long Point Wildlife Refuge and the other at South Beach. Together with the proposed Madaket radar equipment, the three radar devices will operate together to gather information on offshore winds, waves, and currents over a large area of the coastal ocean, southwest of the Nantucket.

Environmental Monitoring
UMASS will be monitoring environmental issues associated with the deployment of the wave device including sediment transport and erosion/accretion. Beach and small boat surveys will be used to assess the conditions before, during, and after the experiment. Assessment and mitigation for any biological impact will be provided. A wave buoy, to be installed by WHOI, will provide near shore estimates of the wave field.

According to the Project research team, the Madaket beaches will not be closed at any time. The wave device is simple with only one slowly moving part; and although no physical danger is anticipated to swimmers or surfers, Resolute Marine Energy will be completely liable for any people injuries or property damaged caused by their equipment. A surface buoy will mark the actual device site, while a representative of Resolute Marine Energy will be checking the wave generator device daily during in-field testing. There will also be a live web-camera, accessible to the public online.

The Board of Selectmen unanimously voted to endorse this research study on December 21, 2011, and again on June 27,2012. The Historic District Commission (HDC) has approved the proposed land-based infrastructure and the Conservation Commission will examine both the shed and the radar antenna in the coming months.

More information about the project can be found online at:
www.ackenergy.org/TidalStudy.html

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Contact:
Lauren Sinatra
Energy Project Coordinator; Town of Nantucket Energy Office
LSinatra@Nantucket-MA.gov
www.ACKEnergy.org