



THE WOODS HOLE RESEARCH CENTER

149 Woods Hole Road · Falmouth, MA 02540-1644 USA
Telephone 508.540.9900 · Fax 508.540-9700 · www.wbrc.org

Major construction completed on the Center's Wind Turbine

August 7, 2009

On Wednesday, August 5, 2009, the rotor was raised onto the nacelle of the Woods Hole Research Center's new wind turbine.

Center Founder and Director Emeritus George M.

Woodwell commented, "Today we watched the assembly and installation of the blades of a 100 kW wind turbine on the 10 acre campus of the Woods Hole Research Center on the southern coast of Cape Cod. It was the latest step in the construction of a campus that burns no fossil fuels."

He added, "Our campus has been a magnificent success, a model of what can be done now, to the advantage of all, in shifting from a reliance on fossil fuels back toward a reliance on renewable energy used in a system that is virtually infinitely sustainable."

The turbine will undergo inspections by the Town of Falmouth and NStar, a process which may take several weeks. Upon completion of those inspections, the turbine will be placed in service. A public event celebrating the completion will be announced. The Ordway Campus was designed from the outset to minimize the impact of building operations on the accumulation of greenhouse gases in the atmosphere. This turbine, in conjunction with a photovoltaic array, actualizes the Center's goal to replace grid input – much of which currently is generated from fossil fuels – with renewable energy sources.

According to Joe Hackler, a research associate who has managed the Center's internal process for this project, "Our efforts to minimize the Research Center's greenhouse gas emissions has driven us to develop an extremely efficient building structure along with the efficient ground source systems to heat and cool the facility. From the outset, we knew that achieving high fractions of renewably supplied energy for the facility would require us to take advantage of both the solar and wind resources available here in our region."

He adds, "This installation reflects the commitment of the Center to implementing technologies that illustrate the kinds of environmentally responsible choices we can make."

The Center engaged Sustainable Energy Designs (SED) as project manager. SED also managed the 2008 installation of the identical machine at Country Gardens in Hyannis.

The Northwind 100 is manufactured in Vermont. The rated maximum output is 100 kW (at 31 mph) with a rotor diameter of 21m (69 feet). The machine has been mounted atop a 117' tower placing the turbine's hub at 121' (37m) above the ground. The wind turbine will be connected electrically to the George M. Woodwell Building and to the NSTAR electrical grid under the state's newly adopted net metering laws. The Center has received a \$225,000 grant from the Massachusetts Technology Collaborative Renewable Energy Trust to partially fund the project.



New wind turbine at WHRC.



THE WOODS HOLE RESEARCH CENTER

149 Woods Hole Road · Falmouth, MA 02540-1644 USA
Telephone 508.540.9900 · Fax 508.540-9700 · www.wbrc.org

According to Acting Director R. A. Houghton, "This turbine has been part of our vision for the Ordway Campus since we began designing this facility in 2002. Members of our staff have worked intensively throughout this process with Northern Power, and the Massachusetts Technology Collaborative, among others. Much information and guidance has shaped our choice, and we are confident that this addition is something with which we will all be pleased."