

AU installs experimental wind turbine

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Alfred University's Center for Environmental and Energy Research (CEER) is testing the winds with a new 10-kilowatt turbine it has installed on a hillside near this Western New York campus. With funding from the New York State Energy Research and Development Authority, CEER installed the wind turbine in a cow pasture at a farm owned by its neighbor, Alfred State College, one of the State University of New York's technology colleges, also located in Alfred, NY. Soon, said Dr. Chris Sinton, CEER director, the turbine will be providing power to the farm's dairy barns. All that is needed is interconnection with NYSEG, the electric utility. The turbine was installed during a five-day workshop held earlier this month and conducted by AWS Scientific of Albany and Bergey Windpower, manufacturer of the turbine. Fifteen people, some of whom had installed smaller wind systems, attended the workshop and learned how to install a 10 kW Bergey Excel-S wind turbine. They gained skills to become eligible wind installers under a NYSERDA incentives program. Area installers who attended the workshop were Roy Butler from Four Winds in Arkport and Chris Schaefer from Solar and Wind FX in Canandaigua. "Wind power is the fastest growing sector in the energy industry," noted Sinton. "Many states, including New York, have seen a dramatic growth in the installation of wind generation over the past five years. This growth can bring jobs and income to the rural areas where wind potential is the highest." The bladed wind turbines that turn to produce electricity come in a variety of sizes. The large 1.5 megawatt turbines placed on 300 foot towers are used in central wind farms, such as the one recently opened in Fenner, NY. These facilities supply electricity into the power lines attached to area residences. Smaller turbines can be placed near buildings that can directly use the power. The Alfred workshop was designed to teach installers how to construct a small wind turbine installation, which in this case was a 10 kilowatt unit on a 100 foot tower (there are one thousand kilowatts in one megawatt). "Small wind turbines can play an important role in supplying clean energy to rural areas," noted Jim Adams, project manager for AWS. The New York State Energy Research and Development Authority, which funded the workshop and a majority of the cost for the turbine, is offering incentives for the installation of small wind turbines. However, the state needs qualified people to install and maintain the equipment, and this workshop ensures that knowledgeable installers are available, said Sinton. The Alfred wind turbine will produce power that will be used by the milking barn at the farm. More important, the facility will be used by students and faculty as a renewable energy laboratory. Christina Ondak, an Environmental Studies major from Alfred University, and Sinton will be monitoring the performance of the wind turbine to determine how much power is produced and when it is available. This information will be used to determine the economic viability of such installations. According to Sinton, "Alfred is in a region with both a large agricultural base and very good wind resources". Whether or not wind can provide an environmental and economic benefit to farmers is one of the things Sinton and CEER hope to demonstrate.