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News Release

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Residential wind turbine latest teaching tool for students enrolled in NMCC alternative energy programs

Aroostook County - A newly installed residential wind turbine is the latest teaching tool new and returning Northern Maine Community College students will access when classes resume later this month.

The 10 kilowatt unit at the site of NMCC's Northern Maine Center for Excellence in Alternative Energy Training and Education will be used by students in the wind power technology and other academic programs that incorporate alternative energy into the curriculum. The \$55,000 turbine, which will be fully operational this fall, was purchased using private funds donated to the College earlier this year by Presque Isle native Mary Smith, a philanthropist who contributed \$1.2 million to NMCC to support expansion of the alternative energy curriculum.

"This will be a most valuable teaching tool for our students and instructors," said NMCC President Timothy Crowley. "The immediate access to hands-on learning opportunities that this residential turbine provides will enhance the efforts of our instructors and will complement other technologies in solar and biomass energy that will be added to the alternative energy center in the coming months."

The turbine, manufactured by Norman, Oklahoma-based Bergey Windpower Company, is an EXCEL model and measures 23 feet in diameter. The unit, installed on an 80 foot lattice tower, is designed for high reliability, low maintenance, and automatic operation in adverse weather conditions.

NMCC purchased the tower through Northern Electric Incorporated of Ashland. The company installed the turbine during the first week of August at the alternative energy center, which is nearby the Presque Isle campus in the Skyway Industrial Park. With the turbine up and running, College officials are now looking forward to its use as an instructional tool.

“Having a working wind turbine system available to students enables first hand opportunity to compare theoretical calculations with actual performance,” said Wayne Kilcollins, NMCC wind power technology instructor. “Running calculations, reading articles, and looking at pictures do not complete the learning experience. Having a system available gives the students the ability for ‘what if’ questions that they can work through and see changes in performance.”

Specifically, Kilcollins intends to use the residential wind turbine in several of his courses, including safety fundamentals, residential wind, wind power concepts and turbine management. Among the exercises students will conduct using the unit include comparative data analysis with that gathered over the past year from an anemometer installed nearby on the NMCC campus last fall, and others using real-time power output data from the turbine. Students will also use the tower for climb and rescue practice activities, and for inspection activities similar to those used in field service.

The EXCEL unit installed at the NMCC alternative energy center was first introduced by Bergey Wind Company in 1983 and has been installed at over 1,800 sites around the world. According to BWC literature, the turbines have a design operating life of 30 to 50 years.

The American Wind Energy Association rates the annual energy production on the turbine model at 13,200 kilowatt hours at an average wind speed of 11 miles per hour. NMCC will use the unit as a supplemental power source for the Northern Maine Center for Excellence in Alternative Energy Training and Education.

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Crews from Northern Electric Incorporated of Ashland install an 80 foot tall residential wind turbine at the site of Northern Maine Community College's Northern Maine Center for Excellence in Alternative Energy Training and Education.