

Wind training facility to be used as classroom for students, community

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Joshua Hahn | 0 comments

Students will now have the chance to break into the alternative energy workforce by learning the ropes in the new small wind training and testing facility being built.

Facilities Management is partnering with JMU's integrated science and technology department to construct it.

The facility will use wind to power itself and excess power will go to a battery charge back inside the facility an excess power will go back into the electrical grid.

Wind Training Facility

The primary purpose of the facility is to teach, according to ISAT professor Jonathan Miles, the principal investigator on the contract and one of several individuals contributing to the design of the facility.

"What we want to accomplish is to stand up and support training for those who are interested in getting into the small wind industry," Miles said.

The facility is intended to train and teach students and companies who want to implement wind energy as an alternative energy source. Miles said students and the Harrisonburg community will use the facility for research and learning purposes.

"We've been involved for a number of years in teaching about wind in the classroom, we're involved in community colleges and K-12 in the community, and we felt it was the appropriate time to get a better instrument for measuring wind," Miles said.

Ground was broken on the new project just last week as an older wind turbine, located on-campus next to I-81, was torn down.

Originally, Miles submitted a proposal to the State Energy Program office for the project in early 2010.

In June 2010, Virginia Lt. Gov. Bill Bolling announced at the Statewide Wind Symposium that the state would grant \$800,000 for the facility. JMU is supplementing this grant with \$200,000 because the total project cost is more than \$1 million, Miles said.

Timothy Shantz, a construction engineer for facilities management at JMU, coordinates the design and construction for the new facilities. Parking will be temporarily restricted in the C10 lot across from the East Campus library, Shantz said.

Until Jan. 15, the 63 spaces in the parking lot will be unavailable. Upon completion, only 27 parking spaces will reopened.

Over the summer, junior engineering major Michael Kessler was the only intern working with the facility.

Kessler's responsibilities included obtaining building standards for the development of the facility and taking requests for proposal from manufacturers and suppliers that provided turbine parts.

Additionally, Kessler evaluated design standards for WeatherBug, a climate monitoring system. WeatherBug will be installed in the facility so that students will be able to interact with it, Kessler said.

"The WeatherBug system will provide annual rainfall, lightning detection and live weather forecasting originated from JMU campus that students will at some point be able to access from a computer or their data phone," Kessler said.

The new turbine will be much taller than the old one, according to Miles, at about 120 feet. The old turbine, which was installed in 2004, was only 80 feet. The new turbine will be able to generate more energy.

The facility will come with other new features, as well. There's going to be a building at the base of the tower that will contain all the equipment to go along with the turbine, including a data logger and monitors, Miles said.

There will also be an advanced weather station, a larger turbine and bleachers that students and others can use during classes.

Andrew Augustine, a senior ISAT and computer information systems double major, plans to use the facilities for his senior thesis.

Augustine is the co-founder and president of the new student club, the American Wind Energy Association.

This club will lead, organize and participate in training sessions and workshops at the new facility.

Kessler said that plans for a second turbine are already in the works. Once the Port Republic Athletics Fields are completed, a second wind turbine will be installed there at a later date, according to Kessler.

The current wind turbine is expected to be completed by January 2012.

Contact Joshua Hahn at hahnja@dukes.jmu.edu.