

Wind turbine generates interest at Willamette University

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Atop the E.S. Collins Science Center at Willamette University is evidence of the next do-it-yourself boom.

At least, that's what senior environmental science student Albert Wright hopes.

Wright and fellow senior Jeff Bennett built a homemade wind turbine. It's a 19-foot structure with a steel base and cedar and fiberglass blades.

"We have proven that this can be built by a couple of people who have never done this before," Wright said. "I had never even welded before."

The entire process took about a year for the two full-time students but the main obstacle was the lack of accurate, available instructions.

The plans they found were "so bad," Wright said, the pair had to throw out parts they made based on inaccurate designs.

The pair plan to write a how-to-build-it manual, complete with blueprints.

Even if wind turbines don't catch on as family weekend projects, the one on top of Collins has served its purpose, said Joe Bowersox, director of the Center for Sustainable Communities at Willamette University.

"The original idea was to put up (a wind turbine) on a Willamette building so at least for a short time we would have the visual impact — what would wind power look like on a small scale," he said.

People have been paying attention. When the blades get moving — like they did last week in strong wind — the turbine makes a loud whirring sound.

"If it's running, the first thing you want to do is look up and see it," Bennett said.

But inquiries about the turbine have not been noise complaints — students and staff have been more interested in its energy production, Bennett said.



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Willamette University environmental science seniors Jeff Bennett (left) and Albert Wright built a wind turbine that now is turning atop the E.S. Collins Science Center on campus.

It's not connected to the power grid right now, but Bennett and Wright are working on a practical application for the renewable energy device: running an irrigation pump at the university's Zena Forest, a 305-acre parcel in Eola Hills 15 miles west of Salem. It will likely be combined with solar panels built by Wright.

The pump will bring water to a garden, the site of a sustainable agriculture program next summer and a supply of produce to the university's food service.

"This gives my students a possibility of being ahead of the time on this," Bowersox said. "On other campuses, students bought kits for putting up small wind turbines. Our students did it from scratch."

The students' work on the wind turbine was made possible by a unique grant from the Center for Sustainable Communities — a focus on something other than research and curriculum.

"This is a hands-on, get-your-hands-dirty, let's-create-something-new project," Bowersox said. "We are not an engineering school, yet we have students very interested in new technologies, including wind turbines and photovoltaics. We want them to have experience and learn by doing."

University officials don't expect wind power to make up a significant portion of the school's future renewable energy resources.

"We are getting darn serious about developing renewable power on campus," said Bowersox, also a professor in the environmental sciences department. "We now have 12 kilowatts on Kaneko and 26 kilowatts (of solar power) on Ford Hall. We are working on a much larger campus-wide plan for renewable energy, and I would suspect given where we are, a large component will be photovoltaic. Wind will play a role, even if only a pedagogical role."

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