

Q: Is that a windmill at Macalester College?

A: No, it's a 10 kilowatt BWC Excel wind turbine; the first of its size in the city of St. Paul.

Q: When was it installed?

A: April 2003

Q: What's the wind turbine for?

A: It is a source of alternate energy for the College. It provides electricity to the Olin/Rice Science building and saves the College money each year on the electric bill.

It is also a great opportunity for students, staff and faculty to be able to research and learn about: wind energy, wind patterns, geography, environmental studies, and the practicality of wind turbines in urban areas.

Q: Where did the wind turbine come from?

A: Bergey Windpower Co. designed and manufactured the turbine (for more information visit www.bergey.com).

Q: How big is it?

A: The monopole is 90' tall and the three-blade propeller is 27' in diameter, for a total height of 102'.

Q: How much did it cost?

A: Xcel Energy donated the turbine to the College at a cost of about \$35,000. Macalester College paid for the installation, which was approximately \$16,000.

Q: Who owns the turbine?

A: Macalester College owns the turbine and is responsible for its upkeep, which includes annual oil changes and semi-annual greasing. If well maintained, a turbine can last twenty to thirty years. In that time it can offset up to 1.2 tons of air pollutants and 250 tons of greenhouse gases.

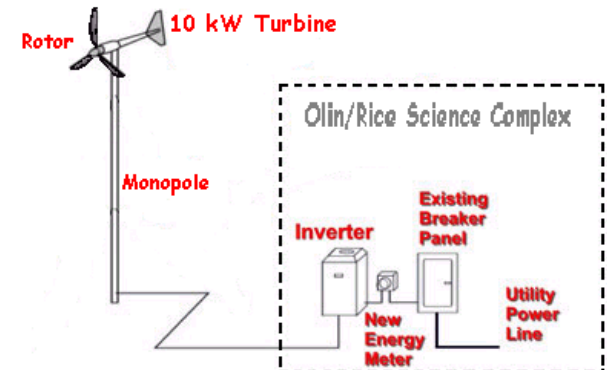
Q: Is it noisy?

A: No. When the turbine blades are turning rapidly, the sound levels are similar to those created by street traffic. Data from an experiment done in California with a similar turbine model showed that it produces about 50.1dBA of sound at a 20' distance and 49.3dBA at 50'. At 100' distance, it creates 44.1dBA, a level that can be equated to soft stereo music or 'white sound.'

Q: Why Macalester College?

A: Other sites were looked into, but Macalester's campus was deemed advantageous because: it is not in the migration path of any birds, it is a great opportunity for alternative energy education, and it will serve as a symbol of Macalester's environmental awareness and efforts.

Q: How does it work?



A: In very simple terms - wind turns the rotor which spins a shaft, located in the generator that is connected to the building (Olin/Rice) electrical system.

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