

For Immediate Release:

Virtual Wind Farm Competition Energizes Students

Utilizing the winds from Lake Ontario, students created an efficient wind farm that accounted for the area’s population density, proximity to high voltage power lines, road access, and even the migration patterns of birds. Sizing and placing wind turbines in Oswego County was part of a Virtual Wind Farm Competition that challenged the students to explore the technical and sociological issues with wind energy. Students at the Edenwald School on the Mount Pleasant Cottage School campus “found participating in the contest to be a fun activity while increasing their awareness of how a wind farm can produce electrical power” according to their technology teacher, Frank Voltaggio.



The Virtual Wind Farm Contest is partially funded by more than \$50,000 through the New York State Energy Research and Development Authority’s (NYSERDA) School Power...Naturally program, which is designed to educate about renewable energy and the role it can play in providing clean energy for our homes, schools, and workplaces. Though the contest has ended, the Virtual Wind Farm Webpage at www.powernaturally.org/Programs/SchoolPowerNaturally/VirtualWindFarm.asp has all resource materials for the contest activity that were developed by New West Technologies, LLC. This page also includes a link to the NYS Virtual Wind Farm Tool that can be used in any classroom or lesson.

In addition to designing the wind farm, the students explained the factors that influenced their location and design decisions then conducted an outreach activity to raise their community’s awareness of wind power generation. Raymond Pitcher at Herkimer High School found that this “gave the students an opportunity to look at the positive and negative effects that wind technology has on a community”. Outreach activity components produced by students included posters, a letter to the governor, and wind power information webpages.

Contest submissions were scored based on the efficiency of the virtual wind farm and quality of the design synopsis and outreach component. Contest judges included industry representatives from Horizon Wind Energy and NorthWind & Power. The best entries for Level II Middle School and Level III High School Divisions had the highest total when combining scores from all three contest components. Contest awards for the top submissions included a classroom visit by a wind power specialist from NorthWind &

2010 Virtual Wind Contest Winners	
<u>Middle School (Level II)</u>	<u>High School (Level III)</u>
MPCS/Edenwald School	Herkimer High School

Power (www.northwindandpower.com), Wind Energy Kits from the Kidwind Project (www.kidwind.org), and Wind Wisdom Kits by the Northeast Sustainable Energy Association (www.nesea.org).

“I teach kids who face challenges beyond what most students face. Interactive, computer based, competitive activities with real world applications definitely ignites interest.”

Dave Reling, Pioneer High School



Herkimer High School Virtual Wind Contest Outreach Component

Wind Power

Wind power is one of the most significant sources of renewable alternative energy.

There are several benefits of using wind power. Not only is wind power the least expensive form of producing electricity, but the best thing about it is that it's free and will always be available, unlike nonrenewable resources such as coal. Wind power is a clean source of energy since it produces no carbon dioxide emissions, or other pollutants. According to people living near wind farms, sometimes the wind turbines can create an interesting landscape. This is also a good source of electrical energy for remote areas, where they are not connected to any electrical power grids. The turbines can be quite tall, but they actually do not take up large plots of lands; agriculture can still continue. Wind turbines are becoming more complex, making them more energy efficient.

Although there are plenty of advantages of wind power, there are also some disadvantages. The strength of the wind is not always constant, which means that the amount of electricity produced will vary. Some people think that the wind turbines disrupt the natural scenery and that they are loud. When the wind turbines are manufactured, a small percentage of pollution is produced.

Today, windmills are becoming a new part of our lives. This alternative source of energy will be able to save you money, reduce our need for foreign oil, which in turn will reduce green house gasses and the affects of global warming.



Blade designs are under constant review and study. The attached design is an exciting new concept that may be able to catch more wind in less area. It is expected to reduce the area needed for this wind farm.



The general location of our wind farm in Oswego, NY.

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New West Technologies is an 8(a) certified small business that provides high quality, cost conscious, multidisciplinary technical support services and management consulting to Federal, state, tribal and corporate clients. Focusing on the transportation, building, power and education sectors, our staff includes engineers, scientists, public policy experts, architects, educators, information technologists, and a variety of meeting management, communication, and management support specialists.

NYSERDA, New York State Energy Research and Development Authority, is a public benefit corporation created in 1975 by the New York State Legislature. NYSERDA's responsibilities, among others, include conducting a multifaceted energy and environmental research and development program to meet New York's diverse economic needs; administering the New York Energy Smart program; making energy more affordable for residential and low-income households; assisting industries, schools, hospitals, municipalities, not-for-profits, and the residential sector implement energy efficiency measures; and financing energy-related projects that reduce costs for ratepayers.