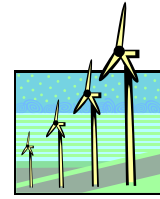


WIND ENERGY EDUCATION PROJECT
A collaborative of
Pace Law School Energy Project
Citizens Campaign for the Environment
New York Public Interest Research Group



Wind Energy Facts vs. Fiction

Sometimes misconceptions or myths about a proposed wind project are unknowingly spread. This fact sheet provides accurate information about wind power.

Myth: For each new turbine that is erected, over 4 acres of forest are bulldozed.

Fact: Turbine foundations, access roads and electrical equipment occupy only about 5% of the total project space.ⁱ To maximize wind potential and minimize project costs, local land use patterns are considered when choosing sites, including the availability of open spaces and cultivated or inactive lands, the number of residents and the spacing between them, the number of land owners, and the proximity to parks and other wildlife habitats. This often allows the large majority of the space between turbines to continue being used for traditional means, such as agriculture.ⁱⁱ



Myth: Wind power does nothing to reduce our reliance on fossil fuels.

Fact: Using more wind power will displace fossil fuels and will reduce our consumption of fossil fuels, thereby reducing harmful emissions that cause acid rainⁱⁱⁱ, ozone smog,^{iv} mercury contamination^v and global warming^{vi}. While it would be difficult for wind power alone to match the demand for electricity in New York, wind power is an important component to create an energy sustainability policy – energy conservation and efficiency, and other alternative sources are also integral components.



Myth: Wind power won't help reduce our fossil fuel consumption.

Fact: The energy we use every day to power our homes and businesses comes from “the grid.” The power generated from a local wind farm will help to “green the grid” by providing additional sources of energy that do not have the harmful emissions of traditional fossil fuel-burning power plants. By adding power to the grid that is generated by wind, we are reducing our need for power generated by fossil fuels.

Myth: Intermittent electricity generation from wind power will cause brownouts or blackouts and power surges.

Fact: Wind is a reliable source of electricity. Before a turbine is proposed for siting, measurements are taken to ensure there is adequate wind, and weather forecasting enables calculations to be made to determine how much electricity will be produced from a turbine ahead

of time. In addition, the transmission lines in New York are designed to accommodate some fluctuations in energy supply.

Myth: Living near a wind farm will significantly decrease property values.

Fact: Studies have shown that windmills have no negative effect on property values. One study analyzed property values in a five-mile radius of wind farms across the country, including New York, and found they increased faster 87% of the time compared to nearby communities. A more recent study looked specifically at homes near the Madison County wind farm and found no measurable effect.

Myth: Wind development will significantly harm local economies.

Fact: In the short-term, local economies will benefit from construction-related employment and money spent on local services. In the long-term, the community will benefit from property taxes paid to the municipality, as well as about one full-time job per 10-20 turbines. It can also provide steady incomes to farmers and other landowners through lease and royalty payments.



Myth: When the blades of a turbine turn in the sun, the effect of the moving shadow is similar to a strobe light and can cause dizziness, migraine headaches and even seizures.

Fact: Research on the moving shadow – or “shadow flicker” – is inconclusive at best. The presence of a shadow flicker depends on the positioning and location of the turbines to the sun and other factors. Since shadow flicker is measurable and predictable, it can be evaluated before a project is built, and simple steps, such as planting trees to break up the shadow, can be incorporated to alleviate potential problems.

Myth: The noise created by wind turbines is excessive and can be heard at great distances.

Fact: With new technology, wind turbines are much quieter than they were twenty years ago. The rotation of the blades was changed to significantly reduce the whooshing sound, and better insulation is used on the mechanical components. At 750-1,000 feet, wind turbines are no noisier than a new household refrigerator.^{vii}

Myth: Wind energy will drive up the price of electricity.

Fact: Actually, wind developed now is cost competitive with fossil fuels (at about 2.5 to 3 cents per kWh). While it is difficult to know the exact effect adding wind power will have on the energy market, reports have shown total costs savings to adding at most 25 cents per month to utility bills.^{viii}

ⁱ *Wind Energy: A Guide for Wind Site Development*. NYSERDA. Page 4

ⁱⁱ *ibid*

ⁱⁱⁱ Baker, JP et al, *Episodic Acidification of Small Streams in the Northeastern United States, Effects on Fish Populations*, 6(2): 422-437. 1996

^{iv} Conrad G. Schneider, *Dirty Air, Dirty Power: Morality and health damage due to air pollution from power plants*. June 2004

^v NYS Department of Health. *2005-2006 Health Advisories Chemicals in Sportfish and Game*.

^{vi} US Environmental Protection Agency, *Climate Change and New York*. September 1997

^{vii} Global Energy Concepts, *Other Potential Environmental Impacts*, October 2005

^{viii} NYS Public Service Commission, CASE 03-E-0188, *Proceeding on motion of the commission regarding retail renewable portfolio standard*, p9, 9/24/04