

Improper Industrial Windplant Siting Threatens Pennsylvania Ridgetops

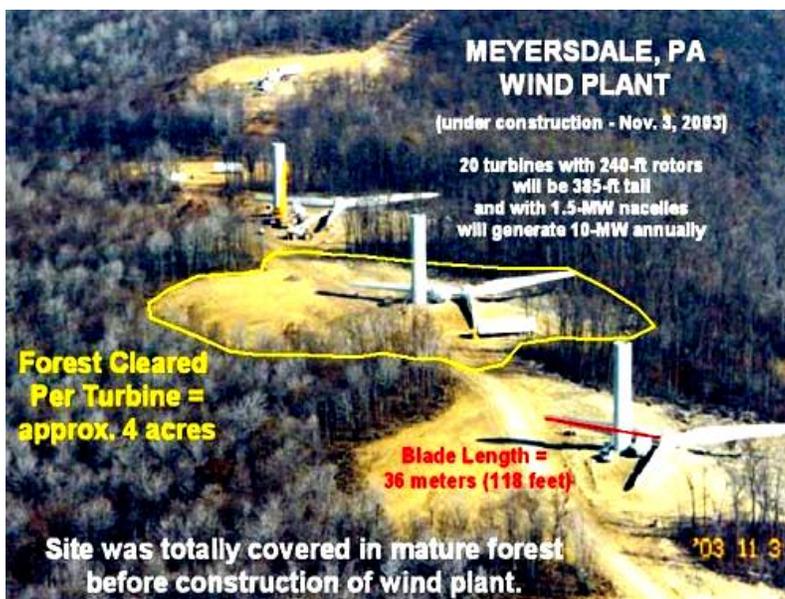
by Dr. Stan Kotala

Conservationists should be aware of the grave threat that a recklessly expanding wind power industry poses to Pennsylvania's forested ridgetops. Although wind is a source of renewable energy, the siting of industrial windplants along the Keystone State's forested ridges would have a severe negative impact on resident and migratory wildlife, and preclude recreation, such as hunting and hiking, within several hundred yards of the wind turbines. A lack of environmental sensitivity regarding windplant siting threatens to destroy the green image of the wind power industry.



A hundred years ago, people who opposed the damming of the Hetch Hetchy were denounced by Gifford Pinchot, Teddy Roosevelt and other nature-lovers as unrealistic preservationists, who failed to see the benefits to nature from sacrificing a few areas in order to save many others from the impacts of coal mining and burning. A century later, with the benefit of better science and more knowledge about aquatic ecosystems, we now know in detail just how devastating large hydroelectric dams can be. A similar scenario is unfolding with industrial windfarms.

The 400 foot tall wind turbines with 120 foot long blades have been shown to kill many birds and bats. Wind technology has certainly improved in the last twenty years; the towers no longer act as massive cuisinarts for anything attempting to fly past. If sited off of direct migration routes, in non-forested areas such as abandoned stripmines or farm fields, they are unlikely to pose any greater threat to birds than any other man-made structures. On forested ridgetops, however, the massive towers will be harder for birds to avoid, especially in foggy or low-light conditions. Ridges such as the Allegheny Front, Tussey Mountain, Tuscarora Mountain, and Blue Mountain are major migratory routes for golden eagles and bald eagles, as well as smaller raptors such as broad-winged hawks, peregrine falcons, and sharp-shinned hawks, and other migratory birds, such as songbirds. Data gathered by the Game Commission last year in the Sproul State Forest showed how a deadly even a low, two-story building could be if it happens to intersect with a migration route during atmospheric conditions disorienting to birds. More than 140 migratory birds died in one foggy night due to collisions at that site.



The situation is a little more complicated with bats, which somehow become disoriented by the motion of the blades. Our ridges, because they provide continuous forest cover in a north-south orientation, serve as travel corridors for migratory bats, such as the silver-haired bat and red bat. The 20 turbine wind energy facility in Meyersdale, Somerset County, is notorious for killing about a thousand bats each year. Other windplants of forested ridgetops have demonstrated an average kill rate of 100 bats per turbine per year. Wind projects integrated into the highest forested ridgelines in the region, unlike wind projects in the Midwest and West, devastate bat populations. A bat eats about 3,000 insects each night during the summer months, so bat losses of this magnitude will result in more mosquitoes and more forest damage from insect pests. Because bats are long-lived and produce only one or two pups yearly, the death of an individual has significant effects on the population.

Because these gigantic turbines will require maintenance, new heavy-duty roads will need to be constructed to the ridgetops of mountains that now are largely roadless, resulting in fragmentation of their forests, which provides a pathway to exotic invasive species, such as Japanese knotweed, Ailanthus, Japanese stiltgrass, Russian olive, and Japanese barberry. In addition to the fragmentation caused by the construction of new, permanent roads, the three- to five-acre pads around each tower quickly add up. **This loss of intact ridgetop forest is the most devastating effect of locating "windfarms" on our mountains.** At least one mile of 30-50 foot wide ridgetop roadway needs to be constructed to service every 8 wind turbines. **Thus, even if the problems with bird and bat deaths by direct collision can be solved, we would see a permanent loss of forest cover in the very places where wildlife most needs it.** In addition, in the central and southwestern portions of Pennsylvania, ridge systems serve as habitat islands for forest-dependent species, such as the scarlet tanager, the wood thrush, the hermit thrush, the black-throated green warbler, the cerulean warbler, the bobcat, and the fisher. Especially hard-hit would be ridgetop endemic species such as the PA Threatened Allegheny woodrat which is particularly sensitive to forest fragmentation.

The US Fish & Wildlife Service's guidance document regarding "wind farm" location states:

1. **Avoid placing turbines in areas where there are endangered species.**
2. **Avoid placing turbines in bird migration pathways.**
3. **Avoid placing turbines near known bat hibernation, breeding, and maternity colonies.**
4. **Avoid fragmenting large, contiguous tracts of wildlife habitat.**

As you can see, **siting industrial windplants on central Pennsylvania's forested ridges is in violation of the criteria for acceptable locations according to the US Fish & Wildlife Service.** It is especially troubling that wind power developers have targeted ridges such as Tussey Mountain, which has been designated as an Important Bird Area by the Pennsylvania Biological Survey because of its importance to migrating raptors, especially the golden eagle. As a matter of fact, Tussey Mountain has the highest number of golden eagles east of the Mississippi River during spring migration! Other disturbing signs include the targeting of Brush Mountain in Blair County, part of the Canoe Creek Important Mammal Area, which is home to the Commonwealth's largest hibernaculum and summer colony of the Federally Endangered Indiana bat; and the targeting of Tuscarora, Jacks, Blacklog, Shade and Canoe Mountains, which are homes to colonies of the Pennsylvania Threatened Allegheny woodrat. Unfortunately, the US Fish and Wildlife Service guidelines listed above are voluntary and the wind industry is ignoring them.

Because of the danger posed by ice and broken parts being thrown from the 120-foot long 15,000 pound wind turbine blades, people will not be able to venture safely within several hundred yards of the towers. Ice from the rotating blades has been thrown hundreds of yards, putting people and property at risk. In addition, the noise from each 400 foot tall tower is the equivalent of a gas-powered generator (100 decibels) and can regularly be heard more than half a mile away. Residents living near wind turbines will confirm the problems of thumping and grinding noises often traveling up to a mile from the turbines, strobe effects, shadow flicker resulting from turbine blades crossing in front of the sun, and problems with ice throw, lightning strikes, and oil

leaks from the 200 gallons of oil carried in each 60-ton turbine nacelle. Siting these massive industrial structures on our ridges would render large portions of these mountains unusable to sportsmen, hikers, and nature enthusiasts and ruin the recreational experience on an even larger portion of these lands because of noise and aesthetic degradation.



Conservationists should seek a balanced approach to energy production. Industrial-scale wind complexes on forested ridgetops offer no real response to the threat of global warming and only token gestures for improving air quality. A much more meaningful action would redirect the substantial tax subsidies available for wind energy to fund conservation and efficiency incentives, for these would have a far greater impact in reducing the effects of fossil fuel combustion and toxic emissions responsible for endangering the world. Taking Pennsylvania as an example, it would require sacrificing 500 miles of ridgetop to place the 4,000 wind turbines that would be needed to provide the Keystone State with just 10% of its energy needs. To begin making a significant difference, the nation would require millions of wind turbines. However, the European experience with only a fraction of these kinds of numbers has been so problematic that many future windplants in Europe are planned far offshore and out of sight, especially in the Netherlands and Germany. Wind energy advocates also must keep in mind that 95% of the United States' wind energy potential exists west of the Mississippi River and that vast amounts of wind energy are available offshore.

In Pennsylvania the only regulatory oversight of windplants is at the local level (townships), so it's very important that residents express their concern to their township supervisors. Unless strict township ordinances controlling wind turbine placement are enacted, both people and wildlife will suffer the consequences. Pennsylvanians should also contact the Department of Environmental Protection and their state legislators to demand strict regulations governing the wind industry to ensure that our wild resources do not get shortchanged.

We must hold the wind power industry accountable, and demand a much greater sensitivity toward conservation concerns if it is to retain its green image. It is not unreasonable to recommend that areas of exceptional conservation value be off limits to industrial wind energy development. **On our forested ridges, the devastating effects of "windfarms" on wildlife conservation and outdoor recreation outweigh any environmental benefit of wind power.**

“The ridge tops in Blair County are one of its defining characteristics. As one looks in any direction, the mountain ridges dominate the landscape. They demonstrate the power and constancy of the natural forces that shaped them. Development along ridge tops should be discouraged so that their imposing beauty is preserved. Ridge lines that should be conserved are the Allegheny Front and Dunning, Short, Loop, Lock, Brush, Bald Eagle, Canoe, and Tussey Mountains.”

The Areawide Comprehensive Plan for Blair County, 2005
Blair County Planning Commission



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