

INDUSTRIAL WIND POWER DEVELOPMENT ON BEDFORD COUNTY MOUNTAINS

What is happening?

FPL Energy, PPM Atlantic Renewable, and other private energy companies want to build industrial wind power plants on top of Bedford County's beautiful and ecologically important forested mountains. (1,2) Targeted mountains include Evitts, Tussey, Brumbaugh, Shaffer, Sideling Hill, Wills, Rays, and Dunning.

Is this bad?

"I believe that during our debates we will find that there are better ways to produce a low-cost, reliable supply of American energy than by spending \$3.7 billion over the next 5 years requiring power companies to produce energy from giant windmills that raise electric rates, only work when the wind blows, and destroy the American landscape."
Remarks of Senator Alexander - Windmill Legislation Introduction, May 13, 2005 by Senator Lamar Alexander (R-TN) (3)

Wind turbine facilities placed along the county's wooded mountaintops will harm or destroy Bedford County's unique natural, cultural, and economic resources for an energy source having costs that far outweigh its benefits. (4)

Wind power advocates and developers are misleading citizens by promoting industrial wind turbines as reliable generators of electricity that will power thousands of homes and by doing so will reduce global warming and decrease our dependence on foreign oil. (5)

Industrial wind turbines only generate power when the wind blows between certain speeds and they produce very little electricity. In this area of the country, existing turbines produce electricity at 30% or less of their rated capacity. (6) The eastern United States has only 5% of the nation's potential for wind power. New Jersey, Delaware, Maryland, West Virginia, and Pennsylvania *combined* have little over one half of 1% of the country's wind power potential. (7) Even if turbines covered all the best available mountaintop sites in the eastern U.S., our expected increased demand for electricity would soon surpass their small contribution. (8)

Industrial wind turbines produce electricity that is too high voltage for local use. It is sold to power companies and placed in the grid. (9) Our electrical grid (PJM) must be able to provide a reliable flow of electricity to millions of households. (10) Industrial wind energy is only capable of contributing a tiny amount of randomly generated electricity into our grid and does not directly power any homes.

"The trouble with wind farms is that they have a huge spatial footprint for a piddling little bit of energy... ." Sir Martin Holdgate, former chairman of the British Renewable Energy Advisory Group. (11)

Industrial wind power is not an effective way to reduce global warming. (12,13) It not only lacks the capacity and potential to offset much fossil fuel usage in our region's grid, but it also requires 24 hour a day backup by conventional power due to its random nature. These realities of wind energy make carbon reduction of any significant amount improbable. In 2004, E.ON Netz (a German company that operates the world's largest number of wind turbines) "admitted that every megawatt (MW) of installed wind capacity required 0.8 MW of backup from 'shadow power stations'" and in 2005, they stated that "traditional power stations with capacities equal to 90% of the installed wind capacity, must be permanently online in order to guarantee power supply at all times". (14)

Furthermore, wind power will not decrease our dependence on foreign oil. Oil is used to generate less than 3 % of the electricity used in the United States and only 1.3% in Pennsylvania. Transportation is responsible for 67.5% of U.S. oil consumption. (15)

What will happen?

If turbines are built, county mountaintops will be cleared of trees and the ground leveled (about 4 to 5 acres disturbed per turbine). (16,17) Additional clearing of trees and grading of the land will be required to build access roads from the mountaintop turbine facilities to existing county roads. (18) Turbine foundations will then be installed. These foundations measure 25 to 50 feet across (19), are 6 to 30 feet deep (20), and are filled with steel rebar and more than a thousand tons of concrete. (21) Each turbine site also typically requires a laydown area (for placement of turbine components prior to installation) and a crane pad area (where the crane would rest while lifting turbine parts into place). (22) The crane pad area requires the soil to be compacted in an area of about 40 x 60 ft. (23) The towers and turbines will go up next, followed by the digging of underground trenches for running electrical cables and communication lines. (24,25)

Turbines are over 400 feet tall (26,27), weigh over 400,000 pounds (28), have blades as long as 140 feet (29) that spin up to 200 miles per hour at their tips (30), have flashing red lights to warn approaching aircraft, and make a thumping, swishing noise (31) that can travel long distances in our type of landscape. (32) They are typically spaced 600 to 800 feet apart (33) and have the potential to stretch out for miles along the top of county ridges. (34) They will dominate the visual landscape and can be seen from over 25 miles away. (35,36)

"If you lease, chances are one or more of your neighbors is going to have to deal with eminent domain. Now these are private development companies, however, once they sell that power to a power purchaser, they can go to the energy commission and as in Butler County (Kansas), in two weeks and a little bit of paper work...they had the power of eminent domain to go across adjacent landowners' property with power lines, with trenches, with no public hearing." Rose Bacon in 'Rancher describes experiences associated with wind farms', in the Sentinel (KS) 11/1/05. (37)

Wind power developers claim to be environmentally friendly. Why then do they want to come here and destroy forested mountaintops?

The current situation can be traced back to policy makers in Washington who relied mostly upon misinformation from the commercial wind industry to create new laws aimed at carbon reduction in our air. This information did not consider the true costs and benefits of wind power. (38) *Absurdly, these laws stipulate that the goal of carbon reduction is to be achieved with “percentages of power generated with renewable sources rather than percentages of lowered pollution levels”.* (39) The law therefore encourages energy companies to produce more electricity from renewable energy sources: hydro, solar, geothermal, biomass, and wind. (40,41) All renewable sources are plagued with problems that prohibit their expansion or use by any great degree. (42) However, wind power lobbyists were very successful in convincing Congress to offer huge federal tax incentives and subsidies for industrial wind power development. (43,44) Needless to say, many energy companies are focusing on developing wind power as their renewable energy of choice. (45) **Additionally, the federal government has no regulations for siting wind power facilities.** (46)

Pennsylvania has taken the federal law even farther by mandating that 18 % of PA’s energy come from alternative sources by 2020. (47) Therefore, it should come as no surprise that Pennsylvania highly promotes wind energy. The U.S. headquarters for the world’s second largest manufacturer of wind turbines, Gamesa, is located in Philadelphia. Gamesa has a turbine factory in neighboring Cambria County and is planning to open future factories in Bucks County. (48,49) While Pennsylvania is highly promoting industrial wind power development, it has no state-level siting guidelines or state-level requirements for environmental assessments. (50) **In Pennsylvania, wind power is regulated by local governments.** (51) **Bedford County and its local municipalities lack regulations.** (52)

Government officials have been taken in by one-sided wind power industry claims and so has some of the media. These powerful influences have all contributed to the lack of national and local public awareness as to the sizeable downside of industrial wind power. (53)

Although our state does not even rank in the top 20 states for wind power potential (54), PA is highly promoting industrial wind energy. Wind power developers are scrambling for easily available sites. **Our federal, state, and local governments should be directing wind power facilities to appropriate locations such as strip mines and fields that are away from people and important cultural and natural areas.**

Who will benefit from industrial wind turbine development in Bedford County?

Developers and power companies will be the big winners. Government subsidies pay for most of the cost of an industrial wind turbine facility. (55) Developers receive tax credits for every kilowatt-hour of electricity they sell. (56) Large investment in wind energy qualifies turbine owners for accelerated depreciation deductions on their income taxes.

(57) They may also receive renewable energy credits, another potential source of revenue. (58) Per kilowatt-hour, industrial wind power is by far the most subsidized energy in the country. (59) **We, the taxpayers and electricity consumers, are paying for it.** Additionally, wind facilities create only a few low paying maintenance jobs (60) and pay very little in property taxes. (61,62)

Landowners who lease their mountaintop property to the developers will receive about \$3,000 per year per turbine. (63) However, they could be putting themselves at risk in many ways by signing bad contracts. For example, facilities could be abandoned sooner than anticipated due to low profits or other changes. (64)

“...federal and state policies on wind energy are transferring hundreds of millions of dollars annually from ordinary electric customers and taxpayers, and misdirecting the nation’s investment dollars into energy facilities that produce a small quantity, low quality product that negatively impacts our environment.” Misplaced State Government Faith in Wind Energy - This Time by the Kansas Energy Council by Glenn R. Schleede, March 1, 2005, 30 years experience in energy and related matters in the private sector and government. (65)

Who will lose and what are the negative impacts?

County citizens (lower quality of life), property owners (lower property values), tourists and tourism businesses, hunters, outdoor enthusiasts, and wildlife will all lose.

There are adverse health effects associated with living near a wind turbine facility and are mainly due to noise and shadow flicker (a strobing effect caused by the blades turning with the sun behind them). These effects include sleep disturbance, balance problems, nausea, headaches, ringing in the ears, and problems with concentration. (66,67,68)

Although rare, lightning strikes and mechanical failure have caused turbine fires. Do our local fire departments have equipment for fighting what would essentially amount to a skyscraper fire? This fire could also spread to the surrounding forest. (69)

Additional health and safety issues include ice throw from buildup on the blades, blade breakage and throw, tower collapse, oil leaks, trespassing and vandalism. (70,71) Other problems include television and cell phone interference and power surges. (72)

Bedford County’s wooded mountaintops are important migratory pathways for birds and bats. They will be injured and killed. (73) Bats will be particularly at risk. More bats were killed at the Backbone Mountain, WV and Meyersdale, PA wind facilities than at any wind turbine plant in the world. (74) Bats are the only major predator of night-flying insects and most species are only able to produce one offspring per year. Mountaintop habitats, home to a number of important species, will be destroyed.

Site clearing and road construction can cause erosion, will negatively impact watersheds, will permanently remove forest cover, and will cause the growth of invasive plant species.

Mountaintops will be permanently disfigured. Heritage views will be ruined.

FOOTNOTES:

- (1) http://abclocal.go.com/wpvi/story?section=sci_tech&id=3626314&ft=print
- (2) http://www.tribune-democrat.com/local/local_story_086000802.html
- (3) <http://www.windwatch.org/documents/126>
- (4) <http://www.windwatch.org/documents/91>
- (5) Bedford Gazette, Vol. 201 No.139, March 21, 2006
- (6) http://www.stopillwind.org/lowerlevel.php?content=topten_3
- (7) <http://www.stopillwind.org/lowerlevel.php?content=BetterEnergyIdeas>
- (8) http://www.stopillwind.org/lowerlevel.php?content=topten_3
- (9) <http://www.delcowind.org/windbasics.html>
- (10) <http://www.pjm.com/about/glance.html>
- (11) <http://www.stopillwind.org/lowerlevel.php?content=NotableQuotes>
- (12) <http://www.stopillwind.org/lowerlevel.php?content=BetterEnergyIdeas>
- (13) <http://www.stopillwind.org/downloads/WindCosts-Schleede.pdf>
- (14) <http://www.windwatch.org/articles/3191>
- (15) http://www.tsaugust.org/images/Wind_Energy_Will_Not_Reduce_US_Oil_Dependence_by_Schleede_04_1201.pdf
- (16) <http://www.stopillwind.org/lowerlevel.php?content=ResponsibleWind>
- (17,18,19) psc.wi.gov/utilityinfo/electric/cases/forwardWind/document/volume1Feis/FFEISV1_Chapter%202.pdf
- (20,21) <http://www.aweo.org/faq.html>
- (22,23,24) psc.wi.gov/utilityinfo/electric/cases/forwardWind/document/volume1Feis/FFEISV1_Chapter%202.pdf
- (25) <http://www.delcowind.org/windbasics.html>
- (26) <http://www.windwatch.org/documents/126>
- (27,28) <http://www.delcowind.org/windbasics.html>
- (29) <http://www.aweo.org/faq.html>
- (30) <http://www.stopillwind.org/lowerlevel.php?content=WindRush>
- (31) <http://www.windwatch.org/documents/126>
- (32) http://www.stopillwind.org/lowerlevel.php?content=topten_8
- (33) <http://www.delcowind.org/windbasics.html>
- (34) http://www.tribune-democrat.com/local/local_story_086000802.html
- (35) <http://www.windwatch.org/documents/126>
- (36) <http://www.contempaesthetics.org/newvolume/pages/article.php?articleID=319>
- (37) <http://www.windwatch.org/quotes/763>
- (38) <http://www.windwatch.org/documents/91>
- (39) <http://www.thecrimson.com/article.aspx?ref=505029>
- (40) <http://www.windwatch.org/documents/126>

- (41) <http://www.windwatch.org/documents/2342>
- (42) <http://www.windwatch.org/documents/126>
- (43) http://www.stopillwind.org/lowerlevel.php?content=topten_1
- (44,45,46) <http://www.windwatch.org/documents/126>
- (47) http://www.tribune-democrat.com/local/local_story_086000802.html
- (48) <http://www.windwatch.org/documents/126>
- (49) http://www.greenjobs.com/Public/IndustryNews/i_news_00380.htm
- (50,51) <http://www.gao.gov/new.items/d05906.pdf>
- (52) http://tribune-democrat.com/local/local_story_360235105.html
- (53) <http://www.windwatch.org/documents/91>
- (54) http://www.earth-policy.org/Alerts/Alert14_data.htm
- (55,56) http://www.stopillwind.org/lowerlevel.php?content=topten_1
- (57) <http://www.windwatch.org/documents/91>
- (58) <http://www.windwatch.org/news/3264>
- (59) <http://www.windwatch.org/documents/2342>
- (60) http://www.stopillwind.org/lowerlevel.php?content=topten_7
- (61) http://www.stopillwind.org/lowerlevel.php?content=topten_6
- (62) <http://www.windwatch.org/news/1513>
- (63) <http://www.windwatch.org/news/1513>
- (64) <http://www.windwatch.org/documents/91>
- (65) <http://www.windwatch.org/documents/91>
- (66) <http://www.windwatch.org/documents/1913>
- (67) http://www.stopillwind.org/lowerlevel.php?content=topten_8
- (68) <http://ventdubocage.net/documentsoriginaux/sante/WindTurbineSy%8Ant.MD,PhD.pdf>
- (69) <http://www.windwatch.org/documents/1913>
- (70) <http://www.windwatch.org/documents/1913>
- (71) <http://www.windwatch.org/pictures/1853>
- (72) http://www.stopillwind.org/lowerlevel.php?content=topten_8
- (73) http://www.stopillwind.org/lowerlevel.php?content=topten_2
- (74) <http://www.washingtonpost.com/ac2/wp-dyn/A39941-2004Dec31?language=printer>