

A Brief Summary of Wind power Facts: Mid-Atlantic Region

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Summary:

Jon Boone addresses wind power for the Mid-Atlantic region.

A BRIEF SUMMARY OF WINDPOWER FACTS

Wind power will not reduce our reliance on fossil fuels. Oil contributes less than 5% of the resources used to generate electricity nationwide and only 1% in the Pennsylvania, New Jersey, Maryland area. Coal and gas-fired power plants pollute the air with toxic hydrocarbons, but the major contributor to pollution comes from automobiles and home heating fuel. More than 60% of the nation's energy consumption does *not* stem from the production of electricity. Wind *only* produces electricity, so even if we construct thousands of massive turbines to replace electricity produced by oil, we would still be 99% dependent on other, mostly dirty, power sources. A real reduction in the use of fossil fuels will be obtained only when appropriate standards and newer equipment increase efficiency and when per capita consumption is reduced through conservation. Wind energy itself will not improve air quality.

Given our escalating rate of **demand for electricity** (2% per year projected over the next 25 years), energy produced by wind in the mid-Atlantic highlands region has little chance of displacing fossil fuel extraction or consumption. The great variation in wind velocity in this region makes steady generation of power problematic. The six existing wind plants in the region haven't exceeded a 30% annual capacity factor, the ability to do actual work. At that rate, more than 2,000 giant 2.5 megawatt (MW) turbines would be needed to replace the annual production of one 1,600 MW coal plant (e.g. Mt. Storm). The highlands east of the Mississippi River have only 5% of the potential wind energy in the continental U.S. Even if we erect huge turbines at all the prime locations in the mid-Atlantic highlands, we would not reduce the need to mine or burn coal to produce power, given the growing demand for electricity.

Despite persistent claims that it will, **wind technology will not “power” any homes** unless those homes have an expensive battery storage system. Given the volatile and intermittent nature of wind and the limitations of the equipment, *wind plants do not function 70% of the time*. As a result, wind turbines, although they will in fact generate electricity to a region's electricity grid, will produce such a small amount that it will immediately be engulfed by increasing demand. Moreover, wind produces least when demand is greatest – during the summer months, wind power fails to work about 85 percent of the time.

Only a few low-wage maintenance **jobs** are likely to result from industrial wind plants – on average one worker for every 12-15 turbines. Only a few guards and local earth moving crews might be hired during construction, but the bulk of that work will be done by non-local people, and those will disappear when construction is completed.

A recent Canadian study shows that the **costs of wind power** “... range from \$67 to \$105 a megawatt, including a return on capital, compared with all-in operating costs of \$34 for coal, \$47 for nuclear, and \$53 for hydro.” In Europe, the cost is twice that of conventional power sources.

The potential **environmental damage** resulting from wind turbines erected on the Appalachian ridges is tremendous. Two years ago, at Thomas, West Virginia's Mountaineer facility, scientists estimate that 4,000 bats were killed by the turbines during *one* migration season. Last year another study projected even more bat mortality, at levels so high that it caused the developer, Florida Power & Light, to refuse to do any more studies. The trouble is that the same ridge tops that are attractive to the wind industry also are major migration corridors for neo-tropical birds and bats. Many of these species are already in decline due to loss of habitat in both their tropical wintering territories and their breeding territories here in the Northern Hemisphere. The cumulative effect of thousands of turbines would be a disaster. Siting turbines on ridge tops will also cause enormous forest fragmentation and displacement of terrestrial wildlife

Let's not make the same mistake with wind energy that we made with hydropower in the last century. The **unintended consequences** weren't sufficiently examined at that time and now taxpayers are paying to dismantle many hydroelectric dams to restore the rivers and aquatic ecosystems.

We all would like to see a reduction of this county's profligate use of energy. We all wish that renewable energy would become a greater part of the energy produced today. But realistically, solar and wind combined will not achieve the renewable percentage goals that have been set by various state, counties, and local communities through **renewable**

portfolio standards (RPS). RPS laws create an artificial demand for wind energy. And while other energy produces like coal do receive significant subsidies, they also produce a lot of electricity. On a per kilowatt-hour basis, wind is the most heavily subsidized source of industrial power in the nation. Using a variety of publicly funded **tax avoidance** schemes, wind energy developers can be reimbursed by as much as two-thirds of the capital cost of each \$1.65 million turbine. This will be an additional burden on taxpayers.