

STATEMENT OF CONGRESSMAN ALAN B. MOLLOHAN  
BEFORE THE  
COMMITTEE ON ENVIRONMENTAL IMPACT OF WIND ENERGY PROJECTS  
OF THE NATIONAL RESEARCH COUNCIL  
NATIONAL ACADEMY OF SCIENCES

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Chairman Risser and members of the Committee – As the Member of Congress representing the First Congressional District of West Virginia, I am pleased to welcome you to the Mountain State. I want to say at the outset that one cannot help but be impressed by the range of the scientific and environmental expertise and experience represented on this panel. The willingness of each of you to devote your time and considerable talents to the work of this committee is most commendable.

As you're aware, this committee's study of the environmental impacts of wind-energy projects is a congressionally mandated study, the parameters of which are set out in a report that the Senate and House of Representatives issued late last year. In my capacity as a Member of Congress, I have been involved in wind-energy issues in this state for several years now, and I believe that your study is an extremely important one, and that it is taking place at a most appropriate time.

The wind-energy industry is a relatively young one in this country, but we now have some years of experience with the operation of industrial wind-energy projects in a number of the regions of the United States. In West Virginia, that experience has been with the 44-turbine Mountaineer Wind Energy Center, which is now owned by Florida Power and Light and is the largest industrial wind energy project east of the Mississippi. The Mountaineer project has been operational for about three years now, and it is located less than 200 miles northeast of here, on over 4,000 acres of Backbone Mountain in the

Alleghenies. The project is in Tucker County, which is part of my Congressional District.

One of the major selling points for wind energy has been its environmental friendliness – that in contrast to conventional energy sources, it does not result in harmful emissions into the atmosphere. But the experience over the past several years has been that industrial wind-energy projects – depending, it seems, primarily on where they are located – can create other kinds of environmental problems and concerns. Those problems certainly include serious harm to wildlife, particularly to birds and bats, and I understand that at your first meeting in September, you received extensive presentations on that subject. Furthermore, because of the huge physical size of these projects, their starkly industrial appearance, and the fact that they dominate the view of the entire area in which they are located, these projects naturally raise concerns when they are proposed to be sited in areas that people enjoy for their scenic, natural beauty.

According to the information that's available to date, it seems that only some wind-energy projects, and not all of them, raise environmental concerns. But wherever those concerns arise, they should not be either glossed over or casually dismissed. Instead, those concerns need to be studied closely and discussed, and they need to be addressed in a full and informed manner.

This is so for at least two inter-related reasons. First, there is the heavily subsidized nature of the wind-energy industry, which, at least in West Virginia, benefits from major tax preferences on both the federal and state levels. As lawmakers consider in what circumstances, and to what extent, these subsidies should continue to be granted

to wind-energy developers and operators, it is vitally important that they have solid information on the environmental impacts of the projects.

Second – and this is a matter that directly implicates the work of this committee – it seems that where wind-energy projects do create environmental problems, those problems will become exponentially worse as the industry, supported by those governmental subsidies, expands, and more and more wind-energy projects are allowed to be sited in environmentally sensitive areas. Before we allow that to happen, we should make ourselves fully aware of what we're getting ourselves into, and we – and by the term "we", I mean lawmakers and other government officials, and our citizens generally – should make an informed, considered decision on whether the environmental damage involved is acceptable to us.

On a separate point, I note that at times it has been suggested that in view of our country's energy needs, the environmental concerns raised by wind power are relatively unimportant, and that those concerns should rarely, if ever, be the basis for rejecting a proposed project. The fallacy of that claim is apparent in the fact that according to even its most avid proponents, wind energy will never be a major power source for this country. Currently wind power generates less than one percent of the nation's electricity, and the goal established by both the Energy Department and the industry itself is for wind power to generate five percent of the nation's electricity by the year 2020. Moreover, there is the fact that wind power is intermittent, and it is not a continuous, reliable energy source. In other words, wind power clearly is not a "silver bullet" for the nation's energy problems, and any misconceptions on that point should not be allowed to preempt consideration of the serious environmental concerns that some projects raise.

In this regard, your decision to travel to West Virginia for this session is most appropriate, for wind-energy projects in this state have indeed raised environmental concerns – concerns that are as serious as those raised anywhere in the country. In fact, for the State of West Virginia and the mid-Atlantic region generally, this study is coming at an absolutely critical time. This is so because, as I'll discuss in more detail later in my statement, it now appears that absent some change in governmental policy, there will be over the next several years an explosion in the number of industrial wind turbines on the mountain ridges of West Virginia. There has been, over the past several years, a lull in wind-power development in this state, but it's now clear – particularly with Congress' extension of the wind-energy production tax subsidy earlier this year – that this has indeed been the lull before the storm.

Of course, the decision on whether industrial wind turbines will be spread across the mountain ridges of this state will be made by the lawmakers and other government officials of West Virginia, and ultimately by the people of this state. But in making critical decisions on whether, where, when, and in what circumstances to allow the construction of wind turbines, the expert analyses and recommendations made by this panel on the environmental impacts of these projects can be extremely useful. As one of the Committee members observed at your September meeting, good policy follows good science, and that's what I hope this Committee will provide us: some good science that will serve as a basis for policymaking regarding industrial wind energy projects in this state and the Mid-Atlantic generally.

In conducting your study, I expect that you will rely to a large extent upon the relevant studies that have been conducted to date, the information that you obtain from

other experts and those with first-hand knowledge of wind turbine operations, and your own expertise. Nevertheless, I believe it is important that you be aware of the context in which your study is taking place, and a number of my comments today relate to that subject. In addition, I would like to provide you with some thoughts I have relating to your work that are based on my experience with wind-energy issues. My comments will focus on West Virginia, but by and large, they are equally applicable to the entire mid-Atlantic region.

Let me begin my elaborating on the comment I made earlier that absent some change in governmental policy, there is going to be, over the next several years, an explosion in the number of wind turbines on the mountain ridges of West Virginia. While there is publicly available information on at least seven industrial wind energy projects that developers are planning or considering for location in West Virginia, I'd like to focus on the four proposed projects on which planning and development seem to be the most advanced.

One of those four projects would involve 50 turbines, and thus would be somewhat larger than the existing Mountaineer project, but the other three would be in the range of double to triple the size of Mountaineer. Specifically –

- US WindForce has proposed to build a 166-turbine, 250-megawatt project on 12,000 acres in the Mount Storm area of Grant County, West Virginia. The proposed site is northwest of here, near the Mountaineer project, and is also in my congressional district. The West Virginia Public Service Commission granted a certificate for the construction and operation of this project in August 2002 – which, I should note, was before the Mountaineer project even became operational. While construction of this

project has not yet begun, the project is very much an active one. The only change that has been indicated is that, according to the company's Web site, the project will consist of 89 turbines, the total capacity of which would be the same 250 megawatts.

- Second, Nedpower has proposed another project for the Mount Storm area, this one to be a 200-turbine, 300-megawatt project that will be located on 8,000 acres of ridge lines. Nedpower was granted a certificate to build and operate this project in April 2003 – which was before the first study of bat mortality at the Mountaineer project was even completed. Again, while construction of the Nedpower Mount Storm project has not yet begun, it clearly continues to be an active project. Indeed, two months ago it was announced that Shell WindEnergy, which is a unit of the international Shell Group, had entered into an agreement to acquire the Nedpower project. Shell has indicated that it intends to erect 150 turbines on the site, rather than the 200 that were authorized, although the project's capacity would continue to be 300 megawatts.
- Third, last month Invernergy Wind filed an application with the West Virginia Public Service Commission for approval to build and operate a 124-turbine, 186-megawatt project at a site in Greenbrier County, West Virginia that's about a hundred miles southeast of here.
- Fourth, just last week, US WindForce filed an application with the West Virginia Public Service Commission for approval to build and operate a 50-turbine, 100-megawatt project on Jack Mountain in Pendleton County, which is about 200 miles east of here. The company had submitted a similar application in November 2004 but withdrew it two months later in the face of strong public protest. The public reaction

was especially strong when it became known that the company and the county government had secretly entered into arrangements for use of the county's eminent domain power to secure rights of way for a transmission line.

Even if we confine our review to these four projects – and even if we use the lower turbine numbers that have been attributed to the US WindForce and the Shell WindEnergy Mount Storm projects – the completion of these four projects alone would mean that the number of wind-energy turbines on the mountain ridges of West Virginia would jump from 44 to as many as 457 – more than a tenfold increase!

And no one should be deceived that this would be the end of wind-energy development on the mountains of this state. As I mentioned, there is publicly available information on at least three additional projects that are being considered for West Virginia. In addition, in 2002 the U.S. Public Interest Research Group released a study that included a conservative estimate of each state's "renewable energy potential," and a statement that was submitted to this committee in September calculated that full exploitation of this state's wind potential as estimated by PIRG would mean the construction of nearly 2,500 wind turbines in West Virginia. In that nearly one-fifth of that number is accounted for by the Mountaineer project and the four proposed projects I've discussed, this calculation may well be a conservative one.

In all likelihood, the recent flurry of activity on wind-energy projects is largely due to the enactment earlier this year, as part of the energy bill, of an extension of the wind-energy Production Tax Credit through 2007. I understand that other states of the mid-Atlantic, including Pennsylvania, Virginia and Maryland, are experiencing similar efforts to build many new industrial wind-energy projects, and that the committee has

already received information on those efforts. It is also likely that this period of activity will extend, at a minimum, well into 2007.

Quite clearly, one of the basic questions before this committee is, if this proposed proliferation of wind turbines in West Virginia and the mid-Atlantic generally is allowed to take place, what would the environmental consequences be? In particular, in view of the extraordinary, and entirely unanticipated, bat kills that have occurred at the Mountaineer project and other wind-energy projects in the mid-Atlantic, two specific questions that arise are these. First, is there any reasonable basis for believing that the turbines at the proposed wind-energy projects I have noted, if allowed to be built, would be any less deadly for bats than the turbines at the Mountaineer project? And second, if the answer to the first question is "no," would the appropriate course of action be to delay the construction of those projects until more is known about why these bat kills are occurring, and whether there are any steps that can be taken to curtail these kills?

An entirely separate concern – and one that is of at least equal importance – is the impact that this proliferation of wind turbines would have on the vistas of, and from, the mountains of West Virginia. For many decades it's been recognized in this country that areas of natural beauty are in themselves a precious resource. In part these areas are attractive because of the range of recreational activities they offer, such as hiking, camping, canoeing, hunting, fishing and skiing. But far more important is the fact that, whether one is engaging in one of these recreational activities or simply passing through, these areas offer the opportunity to enjoy and appreciate the majesty and the wonders of nature in a relatively open, peaceful and quiet setting – an experience that the human spirit finds immensely satisfying.



The mountains of West Virginia are an especially valuable treasure. Indeed, in many respects, this state is defined by its mountains. One of the projects of Franklin Roosevelt's Works Progress Administration was to publish a guidebook on each of the states, and the book on West Virginia, which was published in 1941, well describes this state's natural setting as it existed at that time, and as it exists in large part today. "The scenery . . . is unusual and interesting in its diversity: high mountains are broken by broad level valleys, narrow gorges, or swiftly falling rivulets that form shining miniature falls and cascades; sloping foothills and rolling valleys are ribboned by broad rivers; bare peaks rise above forested hills and field-dotted plateaus." The value of these natural attractions is considerably enhanced by the fact that they are located near many population centers both within and near to West Virginia, making them readily accessible to an increasingly large number of people.

The WPA guidebook includes specific references to Backbone Mountain, on which, as I noted, the Mountaineer wind-energy project was built several years ago. One of those references describes a highway that "gradually ascends Backbone Mountain through groves of oak and sumac to a commanding view of the region. Even on hazy days nine mountain ranges can be seen rolling away to the horizon, like waves of a gigantic sea."

One can hardly conceive of structures that are more intrusive to a natural setting than the wind turbines that comprise industrial wind-energy projects. As the committee has heard, these steel structures can range from 400 to more than 500 feet tall, with blades reaching better than 100 feet each. Each of the larger proposed projects I've noted will involve spreading anywhere from 100 to 150 of these turbines across about 15 miles

of ridge lines. It is beyond question that if developers are allowed to build all of the wind-energy projects they want in West Virginia, the face of this state will be permanently and dramatically altered.

I understand that the members of the Committee plan to visit the Mountaineer project during the spring, and I believe it's vitally important that you do that. As you approach the project on the highway, you will see firsthand how those 44 turbines have drastically altered what had been pristine mountain views. It would also be very useful for you to visit the sites of the proposed wind-energy projects, and to receive a briefing on how they would alter the views from nearby areas.

At the time that the West Virginia Public Service Commission approved the Mountaineer wind-energy project and the two projects in the Mount Storm area, there were no requirements or guidelines in effect regarding the visual impact of proposed projects, and there are no such requirements or guidelines in effect today. Last July the Commission issued a new set of siting rules applicable to wind-power projects. Those rules address the matter of impact on visual resources only to the extent of requiring that applicants submit a description of the expected impacts of their proposed facility on the viewshed within a one-mile radius, a five-mile radius, and a 20-mile radius of the facility. The rules do not specify the types of information that are required to be included in the description, and more importantly, the rules contain no substantive standards or guidelines whatsoever on visual impact. (In fact, the siting rules originally issued by the Commission contained only one substantive set of standards, relating to noise, but when energy companies objected to those standards, the Commission withdrew them. The

Commission has established a task force to make recommendations relating to noise concerns.)

Surely it is possible to develop a set of rules under which the visual impact of these projects will be considered in a systematic, comprehensive way, and to set out standards that define what is, and what is not permissible, with regard to visual impact. This matter is another one on which this committee can provide some very-much-needed analyses and recommendations. Committee members are likely familiar with the Scenery Management System that the U.S. Forest Service has developed over the past 30 years, and that system can be at least one starting point for your effort. That system quite sensibly provides for, among other things, an analysis of the scenic attractiveness and the scenic integrity of an area, as well as an analysis of the visibility of the particular landscape from area roads and other travelways, and from area towns, parks, and other use areas. At times wind-energy advocates attempt to dismiss concerns about the visual impact of industrial wind turbines by claiming that these concerns are entirely subjective, but a system like this adds a significant level of objectivity to the consideration of these matters.

One other subject I'd like to address this morning concerns the environmental-impact studies that are required to be performed when a developer seeks authority to construct and operate a wind-energy project. The experience in West Virginia and elsewhere to date indicates that with regard to those studies, there are at least two guidelines that should be established.

First, in deciding whether a project should be authorized, no government agency should rely solely or primarily on studies commissioned by the developer. Instead, the

agency itself should commission the required studies, and should insure that they are performed by genuinely independent experts. This is a common-sense requirement that recognizes the fundamental fact that whenever an expert is retained by a party to a contested proceeding, there will be some tendency for that person to shade his or her activities or conclusions to suit that person's employer.

Second, in past cases on applications for wind-energy project authority, the West Virginia Public Service Commission at times attempted to address environmental concerns raised by the proposed project by requiring the applicant to perform certain post-construction studies, but it is now clear that this is not an effective means of addressing those concerns. Rather, the only way that environmental concerns can be effectively addressed is to rely on pre-construction studies, and to refuse to grant an application unless those studies and related evidence before the agency establish that the project will have no unacceptable environmental impacts.

These points were well illustrated in a recent proceeding before the West Virginia Public Service Commission in which filings were made that addressed the Commission's April 2003 grant of approval for the Nedpower Mount Storm project. In that proceeding, the Commission staff expressed the quite reasonable position that the approval was subject to change if the studies that the Commission had required Nedpower to perform were not properly conducted, or if those studies revealed new facts that warranted further review. Nedpower immediately and vociferously expressed its opposition to that view, claiming that the Commission's approval had not been conditioned on the particular results that were reached in any of the studies.

The position expressed by Nedpower at that time renders requirements for post-construction studies virtually meaningless insofar as the environmental concerns raised by the particular project are concerned. Nevertheless, I suspect that in similar circumstances, other operators would take this very same position. Indeed, I understand that at your September meeting, you received information that earlier this year Florida Power and Light ceased cooperating in the study of the bat deaths at the Mountaineer project, solely because of the possibility that continued study might lead to recommendations for limited operational restrictions that the company does not want to adopt. Because of the company's decision, no study whatsoever of bat deaths at Mountaineer took place in 2005, even though the studies that were conducted there in 2003 and 2004 showed very troubling numbers of bat deaths.

Earlier in my statement I set out a number of the reasons why the study that this committee is undertaking is so important. I'd like to conclude by noting that there's one more reason why this study on the environmental impacts of wind-energy projects is especially important to the people of West Virginia. Basically, of all the impacts that wind-energy projects have – the positive ones, as well as the negative ones – it may well be that the only significant impacts that will be felt in West Virginia will be harmful environmental impacts.

Let me touch on a number of the specifics –

- The companies that have proposed to develop and operate wind-energy projects in West Virginia are located in other states or, indeed, other countries, as are the investors in those companies.

- Likewise, much of the land on which those companies would erect their projects is owned by out-of-state companies.
- Relatively few employees are required for the operation of wind-energy facilities – according to the operators, even the largest projects will require between 6 and 15 full-time employees each – and so these facilities will not result in any significant number of new jobs for West Virginians.
- Because of the tax preferences that have been granted by the state, these facilities will generate relatively little in the way of new tax revenue for the state or local governments. Indeed, in order to make up for the shortfall, operators have at times offered to make voluntary payments to the local governments, but the difficulties in this kind of arrangement are evident. According to an item that appeared in the news media in April of this year, Tucker County officials asked for a contribution from Florida Power and Light of \$300,000 per year for the next 20 years, while the company offered \$35,000 per year.
- Finally, the applications that the developers have filed with the West Virginia Public Service Commission explicitly provide that the electricity generated by these facilities will not be sold to West Virginia consumers, but instead will be sold elsewhere. So whatever benefits result from wind energy in terms of cleaner air, those benefits will not accrue to the people of West Virginia.

In short, with regard to wind energy, the prospects are that West Virginia will be relegated to something of a colonial status, with its resources being exploited by and for the benefit of outsiders, and with West Virginians being left with a legacy of environmental damage. If this set of circumstances sounds familiar to West Virginians,

that's readily understandable, because it's happened here before. Up to now the environmental damage suffered by this state has taken such forms as past, unregulated mountaintop mining and acid mine drainage. This time, the prospect is for destruction of wildlife and scenic mountain views from a proliferation of industrial wind turbines on the state's mountain ridges.

Again, it is for the lawmakers and other government officials of this state, and ultimately for the people of West Virginia, to decide whether this actually comes to pass. But whatever decisions are made with regard to the construction of wind-energy facilities in this state, those decisions should be fully informed ones, especially on the environmental impacts that will be felt if the developers are allowed to carry out their plans. And this committee can play a critical role in ensuring that both government officials and the citizens of this state have the information they need in order to make these decisions in an enlightened, reasoned manner.

I very much appreciate having had the opportunity to appear before you today, and I would be glad to answer any questions that the committee members have.