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Wind farm company eyes Roanoke Valley

A Chicago company is looking into building a wind farm on Bent and Poor mountains.

John Cramer

An energy company is looking into building wind turbines atop Bent and Poor mountains in Roanoke County.

Invenergy Wind LLC, based in Chicago, is conducting preliminary studies into whether a wind farm could generate up to 81 megawatts of electricity along the mountains' blustery ridges.

Details about the potential project -- including the number and location of turbines -- have not been determined.

But Eastern wind farms typically use 400-foot-high turbines, and 81 megawatts would require more than 50 turbines covering several miles, making it a large facility for the Appalachian Mountains, officials said.

Long based in the West, the wind energy industry is rapidly expanding into the Appalachians and other Eastern sites as the United States looks for more renewable energy sources.

In Western Virginia, Highland and Patrick counties are being considered for wind farms. Invenergy Wind is the developer of a proposed 200-megawatt wind project in Greenbrier County, W.Va.

Wind turbines produce cleaner energy than coal, oil and other power sources, but they often generate controversy because they can kill large numbers of birds and bats and affect other natural resources.

Invenergy Wind is in the early stages of a feasibility study on Bent and Poor mountains and could make a decision whether to proceed with a project in a year or two, said Enio Ricci, vice president for business development for the company.

"We fundamentally believe wind [energy] is good for the country," he said.

Ricci said the company has been evaluating wind speed and consistency, access to the electrical grid and other factors on Bent and Poor mountains, but that "a lot of exploratory work has to be done" before a decision is made.

"All we've done is put up a couple of [wind] instruments and looked at the transmission situation," he said.

Ricci declined further comment, saying it was too early in the process to discuss further.

An out-of-state energy company approached the Nature Conservancy more than a year ago about the possibility of developing wind energy on Bent and Poor mountains, said Judy Dunscomb, senior conservation scientist with the conservancy.

The international nonprofit group has nature preserves and easements covering thousands of acres on the two mountains, including the Bottom Creek Gorge Preserve.

Dunscomb said the wind developer has a reputation for professionalism, but she declined further comment because the conservancy is involved in the permitting process for the proposed wind facility in Highland County.

The Roanoke County Board of Supervisors and the county's planning department are not aware of any wind-energy proposal, said Teresa Hall, county spokeswoman. Any electricity generation project would need a special-use permit, she said.

Bent and Poor mountains may be attractive for wind development because they have strong, consistent winds; large, privately owned blocks of land; and access to transmission lines, officials said.

Many of the ridgelines have Class 3 to Class 7 winds, with Class 3 and higher considered sufficient for wind energy, according to National Renewable Energy Laboratory, a division of the U.S. Department of Energy that produces GIS-based wind maps nationwide.

Most Appalachian wind turbines generate about 1.5 megawatts, so a wind farm producing 81 megawatts would require about 54 wind turbines, said Rick Webb, a University of Virginia environmental scientist. Appalachian ridges typically have about eight turbines per mile, so 54 turbines would cover nearly seven miles, he said.

Most Eastern wind turbines are about 400 feet high from base to the tip of the blades -- or nearly 100 feet higher than the Statue of Liberty -- which likely would make turbines on Bent and Poor mountains visible from the Blue Ridge Parkway.

Frank Maisano, a spokesman for a mid-Atlantic wind-energy coalition that includes Invenergy, said 81 megawatts would require a significant number of turbines.

He said the final scope of any wind project would depend on the type of technology, when the turbines are built and other factors.

Maisano said wind developers spend years looking into potential projects, and that the public has many opportunities to be part of the process.

Wind farms are a "win-win situation" for local communities because they provide clean energy, tax revenue and other environmental and economic benefits, said Maisano, a consultant for the Highland County wind developers.

"A lot of opponents get whipped up into a hissy before we can even look at these things in a responsible way," he said.

Invenergy Wind applied in January for an interconnection feasibility study for Bent Mountain. The application was filed with PJM, the company that manages the electricity distribution grid for Virginia, 12 other states and Washington, D.C.

The application lists 2008 as the target date for the wind farm to go on line, but Ricci said a more likely time frame was within five years if the proposal were to go forward.

PJM spokesman Ray Dotter said confidentiality agreements prohibited the company from discussing specifics of the Bent Mountain project. But he said an 81-megawatt facility, which would connect to power lines, would be a "good size" wind farm for the Appalachians.

Most studies at this early stage, which involve evaluating wind strength and consistency, financial costs, permitting and other factors, do not proceed to construction, Dotter and Ricci said. Dozens of applications for wind energy in the

mid-Atlantic region are pending with PJM.

If Invenergy decides to proceed, it will move to the next steps in the permitting process with PJM.

Webb, who opposes the Highland County wind project because of its potential consequences for birds, bats, viewsheds and other natural resources, suggested Bent Mountain residents educate themselves about wind energy, its benefits and drawbacks and the siting of wind turbines.

"Virginia communities have the opportunity to avoid mistakes that have been made elsewhere in the central Appalachian states," Webb said.

The potential Bent Mountain project "serves to illustrate the big problem with Appalachian wind farms in general -- for the most part, the only areas with sufficient wind for commercial wind projects are the ecologically special areas that represent the best of what remains of our wild landscape," Webb said.

Dunscumb said the Nature Conservancy supports wind energy in general, but that turbines have to be appropriately located so they don't kill bats, birds and cause other environmental problems.

The potential project's costs depend on various technology, construction, environmental, road building, transmission line and other factors, but it could be about \$100 million if it includes more than 50 turbines.

By comparison, the Highland County project's 19 turbines have an estimated cost of \$60 million. The project is under consideration by the State Corporation Commission.

On the Net:

www.pjm.org/planning/project-queues/queue-p.jsp

www.inveneryllc.com/wind.html

www.vawind.org

www.awea.org
