

W.Va. wind proposal found lacking

Liberty Gap may not have met 'burden of proof,' says engineering division

BY ANNE ADAMS • STAFF WRITER

CHARLESTON, W.Va. —There are further indications this week that a 50-megawatt wind utility planned for Jack Mountain in Pendleton County is likely to spread into Highland County, Va. by the end of 2009.

Even if the plant were to remain in Pendleton, it will likely be seen from points in Highland, including the McDowell Battlefield's historic Sitlington Hill.

Either way, experts for West Virginia's Public Service Commission say they cannot recommend approving the project at this time.

Liberty Gap, LLC, a subsidiary of U.S. Wind Force, has an application pending before the PSC, and testimony is being filed in preparation for an evidentiary hearing scheduled for Dec. 12.

Among the documents submitted is a report by state PSC engineers analysts. Liberty Gap, they said, may not have met its "burden of proof" to ensure the public and the environment would not be harmed by the facility.

The 128-page report summarizes most of Liberty Gap's application materials and studies, and some of those filed by Friends of Beautiful Pendleton County, the grass roots group opposed to the plant. Technical analyst Wayne Perdue of the PSC's engineer division, and Dixie Kellmeyer of its utilities division, found some of the developer's studies lacking. They reviewed a host of things related to Liberty Gap's application for a state permit, including the conclusions made by other West Virginia agencies, transmission line studies, and visual and noise impacts.

The utility would be owned by U.S. Wind Force LLC. The company proposes a plant producing up to 125 megawatts of electricity generated by some 50 wind turbines along the Jack Mountain ridge 10 miles south of Franklin, along with a 17-mile transmission line to carry the power to the substation in Franklin. The total cost of the project is estimated at between \$175 million-\$190 million. Depending on the model of turbines used, the towers and their blades would reach a height of between 339 and 426 feet.

Liberty Gap secured 71 lease arrangements off-site to construct the transmission line from

the project to the substation, which requires a 100-foot wide corridor.

Visual impacts in Virginia and West Virginia

PSC analysts noted Liberty Gap submitted topographical and aerial maps to illustrate the project that sufficiently show its scale. Most of the requirements for the agencies' siting rules were met, they said, but there were still some specifics lacking where the map "appears to either lack sufficient scale to illustrate the required information or lacks the information altogether. Some specific information which appears to be lacking for this map concerns public or private recreational areas, parks, forests, hunting or fishing areas, and archeological/historical places." They indicate some of the missing information could be submitted during required surveys that will come later.

Ultimately, they said, "it is impossible to determine the structures' total height above sea level and visibility" because the final location of the turbines is not yet known.

Liberty Gap provided the PSC with drawings from various scenic overlooks from which the project will be seen, including Reddish Knob, Spruce Knob, U.S. 200 at the Kimball Farm, the Pendleton courthouse, and Germany Valley overlook. From some of these, some of the turbine array will be visible, and from others it will not be seen at all.

From Spruce Knob's overlook tower, for example, it appears the tip of one turbine may be seen. From the courthouse, at least one full turbine will be visible. They will not be seen from Germany Valley, however.

A 20-mile radius analysis was conducted on the basis of topographical features, which does not include the impact of tree and foliage cover or man-made structures. While Liberty Gap's studies show viewshed impact will be minimal from the turbine site, certain portions of the transmission line under construction may be seen within one mile, but little or no impact is predicted with five miles.

A FOBPC consultant, however, provided a list of 24 additional view points for the area around the project site. PSC staff, using GPS technology, confirmed the project would be seen from those points, some of which lie in

Highland County, among them the Blue Grass cemetery, Doe Hill area, and Sitlington Hill at the McDowell Civil War battlefield.

Extending the project?

As previously reported in The Recorder, PJM grid studies showed Liberty Gap is keeping open its option to extend the project further down the ridge into Highland County across the Virginia state line in the Doe Hill area.

The engineering report also appears to confirm that possibility, though Liberty Gap indicated it has no current, specific plans for adding turbines to the linear array as proposed. PSC staffers looked at the May 2006 PJM interconnection facilities study, which shows the request filed by the company allows for a maximum capacity of 200 megawatts. That would accommodate up to 112, 1.8-megawatt turbines. The studies show Liberty Gap requests non-conforming changes, and that the total project would not exceed 155 megawatts. Changes require further study, PSC staffers said.

The report's description of commercial operation shows 44 turbine units in place on or before Nov. 30, 2008, and another 42 units in place on or before Oct. 31, 2009.

"The original proposed 44 turbines for this project is equivalent to 79.2 megawatts," the report states. "The additional 42 turbines would constitute an additional 75.6 megawatts with a total facility output of 154.8 megawatts. The (utilities study) also indicates Liberty Gap must obtain all site permits as well as a siting certificate before Sept. 30, 2007 and have a memorandum of understanding (for acquiring equipment) before Oct. 31, 2007. The location of the additional 42 turbines is not clear."

However, given the topography of the project site, most involved agree if the project were extended, it would likely be into Highland. The PSC staff said Liberty Gap indicated the possible off-site construction of further additions "is possible if the demand for renewable energy continues to expand."

The engineers noted the southern tip of the Pendleton project is at the West Virginia-Virginia border. "Jack Mountain continues southwesterly so that additional wind turbines could

be installed in the state of Virginia in a fashion that is contiguous with the West Virginia portion of this project. Therefore, wind turbines generating power in the state of Virginia would be transmitting their generated power to (Alleghany Power's) North Franklin substation."

Water resources likely to be impacted

PSC's report extensively reviewed studies of water resources in the project site area by both FOBPC consultants and Liberty Gap — a point of contention between the company and those opposed to the project.

Essentially, Liberty Gap has stated it predicts no water resources would be affected by its project, but a geologist hired by FOBPC says springs, streams, aquifers and karst features in the area are all integral components in a complex, interconnected hydrogeological system that begins as groundwater recharge on the summit of Jack Mountain, and that much is unknown about its features.

PSC engineers said it is significant that contrary to the water budget requirements in state siting rules, "the applicant has failed to acknowledge the magnitude of this issue in either the primary application or the phase I report, and failed to provide even the most basic of details concerning how they intend to 'encourage direct infiltration' of such a massive volume of storm water, greater stream bank erosion ... and increased sediment ..." but Liberty Gap "rightfully points out the inherent difficulties" associated with replanting vegetation on such severely disturbed ground where the turbines would be located.

The erosion and sediment likely to be caused by the project "has the potential to affect the long term and seasonal viability of many private water supplies," the report concluded.

Engineers also expressed concerns about bat populations, particularly endangered species, in caves known to exist throughout the region near the project site. The full extent of most of these caves, and the details of their ground watersheds, are not known," they said. In one area particularly, along Sandy Ridge Road, the karst topography is among the most well-developed. Liberty Gap's report, they said, "seems to imply that resolution of unexpected cave and karst encounters is a simple matter of grout and filter fabric, but this is not likely to be the case, especially if construction ... collapses the roof of a cavern." They concluded that any attempts to fix such a problem are "likely to lead to an ongoing cascade of further problems."

Engineers said they do agree with one thing

stated by Liberty Gap — that in this specific area, "avoidance may not be possible."

The PSC staff report said it's clear FOPBC and Liberty Gap differ as to how the project might impact water resources, especially the developer's claim it would have no impact at all. "The main problem with that claim is that no evidence is presented to support it," the report explains. "Any number of basic field observations directly contradict the underlying assumption put forth by (Liberty Gap) that each formation, aquifer, geographic area ... and geologic feature somehow stands in isolation from everything else around it. Such observations are readily visible at many places."

Further, they said, "Sinking streams are the rule in limestone areas of Pendleton County, not the exception. Given that this scenario is so visible in so many places, it seems astonishing that almost none of it is acknowledged, much less described in any detail (by Liberty Gap)."

In general, they agreed the lack of analysis provided by the company "basically leaves standing the vague and misleading statements in the primary application, such as 'the wind project will not affect any surface or subsurface water body' and thus deserves to be exempt from the various requirements in the siting rules and 'any net decrease in diffuse recharge area will be offset by the increased rechargeable flow quantity,' which is just a convoluted way of saying 'increased storm runoff.'"

Overall conclusion

The PSC's engineering division stated there appear to be major disputes between experts for Liberty Gap and those opposing the project as intervenors on everything from bat mortality and noise, to water and viewshed impacts. "Because of the complexity of the expert testimony and project studies, the engineering division is concerned that the applicant may not have met its 'burden of proof' in assuring that the public and environment will not be harmed by the proposed project. Therefore, the engineering division finds that it cannot recommend granting the applicant a siting certificate at this time."

The report did recommend a list of conditions for the PSC if it decided to grant the permit anyway.