

Poor Mountain Energy Project Frequently Asked Questions and Answers

Please note: The purpose of this document is to address some of the most common questions we receive. General facts and background about the proposed Poor Mountain Wind project can be found on the Project Fact Sheet on our web site at <http://poormountain.inveneryllc.com/>

What is the maximum number of turbines proposed for the project?

Invenergy is proposing to install no more than 18 turbines on Poor Mountain. This 18-turbine layout is based on our best estimate of the maximum number of potential sites available for wind development in the project area, factoring in the presence of conservation easements and existing communications infrastructure on adjacent parcels. This is consistent with the 18 applications for individual turbine locations that we submitted to the Federal Aviation Administration (FAA).

Will the Poor Mountain Wind Energy Center receive any tax benefits or subsidies?

Yes, the federal government provides subsidies to encourage investment in a wide variety of domestic energy sources, including electricity generated by wind energy. The main incentive for wind projects like the Poor Mountain Energy Center is the federal renewable energy production tax credit (PTC). The value of the tax credits awarded to owners of wind projects varies according to the actual amount of electricity produced by the projects during their first ten years of operations. For more information on U.S. energy subsidies and wind energy please read the related fact sheet found at http://www.awea.org/pubs/factsheets/Subsidies_Factsheet.pdf.

How many acres will the project's footprint cover?

Of the approximately 2,000 acres under lease on Poor Mountain, the project should disturb less than 60 acres. The construction footprint for a wind project typically requires two to three acres per turbine, including the area occupied by turbines, roads and other equipment. Shortly after construction, this area is largely reclaimed, resulting in a smaller permanent footprint defined primarily by the area surrounding each turbine foundation (approximately a 50 foot diameter circular area), gravel access roads with a final width of 16 feet, and the project substation. Invenergy will provide a specific calculation as to the total footprint of the facility after a detailed site plan has been discussed with Roanoke County.

What is the distance from a proposed turbine location to the closest residence?

The shortest distance between an existing residence and a proposed turbine location is approximately 2500 feet.

Will the wind farm negatively impact property value?

Wind turbines do not negatively impact property values. On the contrary, a study released in December 2009 by the U.S. Department of Energy's (DOE) Lawrence Berkeley National Laboratory concluded, "The various analyses are strongly consistent in that none of the models uncovers conclusive evidence of the existence of any widespread property value impacts that might be present in communities surrounding wind energy facilities. Specifically, neither the view of the wind facilities nor the distance of the home

to those facilities is found to have any consistent, measurable, and statistically significant effect on home sales prices." The DOE-sponsored research collected data on almost 7,500 sales of single-family homes situated within 10 miles of 24 existing wind facilities in nine different U.S. states.

What will you see of the project at night?

For aviation safety, the FAA will require that red aircraft warning lights, such as the ones found on cell towers, be placed on some, but not all of the turbines. FAA typically requires lights on between one-third and one-half of the turbines in a given project, which would require 6-to-9 additional lights on Poor Mountain.

Will shadow flicker be a concern at the Poor Mountain Project?

Shadow flicker can occur when a wind turbine's moving blades cast a moving shadow on a nearby residence, depending on the time of the year (which determines how low the sun is in the sky) and time of day. It is possible to calculate very precisely whether a flickering shadow will in fact fall on a given location near a wind farm, and how many hours in a year it will do so. The significant buffer between the turbines at Poor Mountain and adjacent residences makes it unlikely that shadow flicker will be observed by any of the project neighbors. As part of the permitting process, Invenergy will hire an independent expert to prepare a shadow flicker study that analyzes the potential, if any, for shadow flicker to affect any neighboring properties. In general, scientific studies have proven there is no correlation between shadow flicker and epileptic seizures or other health issues.

Will ice thrown from turbine blades present a danger?

As with any structure, wind turbines can accumulate ice under certain atmospheric conditions, such as ambient temperatures near freezing (0°C) combined with high relative humidity, freezing rain, or sleet. Weather conditions may then cause this ice to fall, potentially causing damage to structures and vehicles, and injury to site personnel and the general public unless adequate precautions are put in place. At Poor Mountain, these precautions include: using modern turbines with sensors that shut the turbine down when ice is present; imposing significant buffers between the turbines and adjacent properties to ensure that ice will not be a safety concern outside the project boundary; and installing warning signs as appropriate for the protection of site personnel and the public.

How will birds, bats and other wildlife be protected?

Virginia is taking the lead nationally in developing a regulatory framework for developing small wind projects that is protective of natural, cultural and historic resources. Upon final approval of this framework, considerations related to wildlife and other natural, historic and cultural resources from proposed wind energy projects will come under the purview and expertise of the Virginia Department of Environmental Quality (DEQ) and its related agencies.

The purpose of the DEQ wind power regulation is to provide a responsible and thoughtful framework to analyze the potential benefits and adverse impacts of a proposed wind energy project on Virginia's natural, cultural and historic resources and provide binding

regulations on how these projects will be constructed and operated. Potential adverse impacts will be mitigated in a manner that is protective of the natural environment. For example, it is expected that turbines will be shut down (curtailed) during the periods with the highest potential for bat mortality at the Poor Mountain site. *Please see Invenergy's Wind Regulation Fact Sheet at <http://poormountain.inveneryllc.com/> for a more in-depth discussion of this topic.*

Do the carbon reduction figures and number of households powered by this project take into account the intermittent nature of wind and turbine curtailment during bat migration?

Absolutely. Wind speeds have been measured by Invenergy for over six years at the Poor Mountain site. Several anemometers are collecting wind data from various heights on a previously existing tower. The data is sent via satellite to Invenergy's consultant, who provides a report to Invenergy regarding the wind characteristics. Finally, Invenergy's engineers utilize state of the art software to further analyze the wind data and determine the potential for generating electricity.

After Invenergy provided information regarding the strength of the wind resource on Poor Mountain and the capacity of the turbines that are expected to be used, Sean McGinnis, Director of the Green Engineering Program at Virginia Tech, estimated the carbon emissions based on carbon emissions analyses that he has worked on with Roanoke County and the City of Roanoke. This analysis will be made available on the project website at a later date.

Why is Invenergy using 2.5 MW turbines? How many are in use already?

The project site is constrained by conservation easements that surround it. The number of turbines proposed is the maximum number of turbines that could be placed here. As you may be aware, several years ago Invenergy looked at the Poor Mountain site and decided not to pursue the project at that time because it would have required more turbines to make the project feasible with the types of turbines available at that time. Turbine technology has advanced considerably since that time, enabling Invenergy to explore the possibility of developing a much smaller wind project (15-18 turbines) by utilizing the more efficient 2.5 MW turbines. There are thousands of 2.5 MW (or larger) turbines in use in Europe and they are now coming into wider use in the U.S.

It should be noted that 1.5MW turbines may be configured to utilize towers and blades of varying size. Those tower heights and blade lengths may be configured to rival those of the 2.5 MW turbines. Invenergy has offered that the maximum height at the tip of the blade at its apex will be 443 feet. It is quite possible that the final height will be below 443 feet, but not above it.