

Siting a Wind Farm Roles and Key Questions

The Bureau of Land Management has received a proposal from a developer to build a wind farm on public land in your community. You understand that developing renewable resources is a way to meet the growing electricity needs of your area, but you are concerned about the impact a wind farm might have on your community. You and other stakeholders have been invited to present your perspectives at a public forum. Based on your research, followed by your panel presentation, the community will vote on whether or not to support building the wind farm.

Governmental Agency Representative—BLM

The Bureau of Land Management is an agency in the Federal Government that is responsible for managing and conserving the resources that are on public land. The BLM has a policy of encouraging multiple uses of public lands. If a wind farm is built on the public land under your control, you will be responsible for overseeing and managing the project. The federal government would receive lease payments and/or royalties from the developer.

1. What are the advantages and disadvantages to the BLM of allowing the development of the wind farm?
2. What are the major issues that the BLM must consider before allowing the development of the wind farm?
3. One of the jobs of the BLM is to protect the public's interest in the land. Will allowing the development of the wind farm be in the best interest of the public?

Developer

As the developer of the wind farm project, you must create a plan that details the advantages of establishing a wind farm in your particular area. You must also be able to answer questions from those groups that might oppose the wind farm. It is important as the developer that you understand the "big picture" of the positive and negative impacts of developing the wind farm.

1. What are the long-term benefits to the community of developing the wind farm?
2. What are the disadvantages? How will potential risks be minimized?
3. How will the environment be protected during the installation, operation, and maintenance of the wind farm?

Investor

An investor is someone who uses his or her money now, in order to make money later. A developer has approached you with a proposal to build a wind farm in a nearby community. As an investor, you are interested in paying money now to build a wind farm, with the idea that you will earn money later as the wind farm becomes productive. You need to determine the costs, risks, earning potential, and benefits of investing in the wind farm.

1. How much will it cost to build and maintain the wind farm? What costs do you need to consider?
2. How much return of income can you expect from your investment? Over how many years?
3. What are the biggest risks to investing in the wind farm?

Site Planner

The site planner of a wind farm considers many factors to determine the best location for a wind farm. You must take into consideration the important concerns that community members have. You need to determine the optimum areas for the turbines in regard to local weather patterns. You must also take into consideration any other environmental factors that might affect the siting of the wind farm.

1. What information about local and global weather patterns and wind technology must you research before siting a wind farm?
2. What environmental factors must you consider before siting a wind farm?
3. What other factors must you consider? Are there roads and power lines nearby?

Farmer/Rancher

You are a farmer and rancher who has a long-term lease of 10,000 acres of public land that you use to grow crops and graze your cattle. The Bureau of Land Management has informed you that it is considering a proposal to allow a wind farm to be built on part of the land. You think that using renewable energy and having multiple uses of the land are good ideas, but you are concerned about the impact of a wind farm on your crops and animals.

1. What impacts will siting, building, and operating a wind farm have on your crops and cattle?
2. Will you have to reduce the acres of crops you grow or the number of cattle that graze on the land?
3. Are there any benefits to you of building the wind farm on your leased land?

Consumer/Neighbor

You are a neighbor of the farmer/rancher on whose land the wind farm might be built. You have heard that large wind turbines generate a great deal of noise and that concerns you because the chinchillas you raise are very sensitive to noise. You are aware that there have been predictions of blackouts in the near future in your area because of a lack of electricity capacity. You are also wondering how the price of electricity in your area might be affected if a wind farm were installed.

1. How much noise do wind turbines generate?
2. How would a wind farm affect the property values of the surrounding properties?
3. How would local electricity rates be affected by the installation of a wind farm?

Environmentalist

You are very concerned with protecting the environment. You would like to know how wind energy impacts the environment during the manufacture, installation, maintenance, and removal of the wind turbines. Also, there have been reports in the past of wind turbines injuring birds and bats that fly into them. You would like to know how wind energy installations might affect birds and animals in your area.

1. How would the manufacture and installation of wind turbines affect the local environment?
2. How would the operation of the wind turbines affect the surrounding environment and the plants and animals in the area?
3. Would the amount of electricity generated by the wind turbines be enough to offset the 'cost' to the environment?

Economist

An economist is a person who can analyze the financial impacts of actions. The community that will be affected by the development of the wind farm has consulted you. They have asked you to determine the costs of generating electricity from fossil fuels and wind energy and to do a comparison study. This includes comparing construction costs, transmission costs, generation costs, and potential tax credits available for using wind.

1. How does the cost of using wind to generate electricity compare to other sources?
2. What economic advantages/disadvantages would the wind farm bring to the area?
3. Will the wind farm impact the economy of the area by bringing more jobs to the area?

Utility Company Representative

You are an employee of the local utility company and are responsible for making sure that your utility has the necessary capacity to provide electricity to all of your customers. There is increased demand for electricity in your community and you know you must secure reliable sources of additional generation in the near future. You would be the main purchaser of electricity from the wind farm.

1. How expensive would the electricity be from the wind farm?
2. Will the wind farm produce enough electricity with reliability to meet the growing needs of the community?
3. Will there be additional costs to the utility company that might be passed along to consumers?

Member of the County Commission

The County Commission manages the public services of the community and determines how they are paid for. The County Commission is a political group and must take into consideration all political sides of the issue. You must consider the impacts on the community if the BLM allows the wind farm to be developed in the area.

1. What impacts would the wind farm have on the need to provide local services?
2. What economic impacts would the wind farm have on the local community and taxes?
3. What political impact would supporting the wind farm have on your community?

Role Group:

Question 1

Question 1

Essential Details

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So what? What's important to understand about this?

WEB Resources for Wind Research

American Wind Energy Association
www.awea.org/faq/wwt_environment.html

American Wind Energy Association – Economics of Wind Energy
www.awea.org/pubs/factsheets/EconomicsofWind-March2002.pdf

Audubon Society
www.audubon.org/campaign/windPowerQA.html

Danish Wind Industry
www.windpower.org/en/core.htm

Department of Administration – Wind Siting Guidance
www.doa.state.wi.us/pagesubtext_detail.asp?linksubcatid=976

European Wind Energy Association
www.ewea.org/index.php?id=204

FPL Energy – Wind Siting and Development
www.fplenergy.com/portfolio/wind/siting_develop.shtml

Harvesting Clean Energy
www.harvestcleanenergy.org/wind/

KidWind
www.kidwind.org

NEED Project: Energy on Public Lands
www.need.org/needpdf/EnergyonPublicLands2006BLM.pdf

Our Wind Co-op is a unique cooperative of small-scale wind turbines on farms, ranches and public and private facilities across the Northwest. Through this collaborative effort, 10-kW turbines were installed at numerous rural sites serviced by publicly-owned utilities.
www.ourwind.org/windcoop/

Renewable Energy Access
www.renewableenergyaccess.com/rea/news/story?id=46840

Wind Energy Easements and Leases: Information for Landowners and Good Practices for Wind Developers
www.windindustry.org/opportunities/lease.htm

Wind Energy Siting Handbook - Kansas
www.kec.kansas.gov/reports/wind_siting_handbook.pdf

Wind Power Maps
www.windpowermaps.org/default.asp

Wind Powering America
www.eere.energy.gov/windandhydro/windpoweringamerica/ne_economics_determine.asp

Windustry – Learn How to Harvest the Wind
www.windustry.org/

Windustry Wind Calculator
www.windustry.org/calculator/default.htm

Google: “planning commissions wind” for many sites.