Wind Energy Development

Community Responsibilities and Potential Benefits

OHIO FARM BUREAU®

System Development

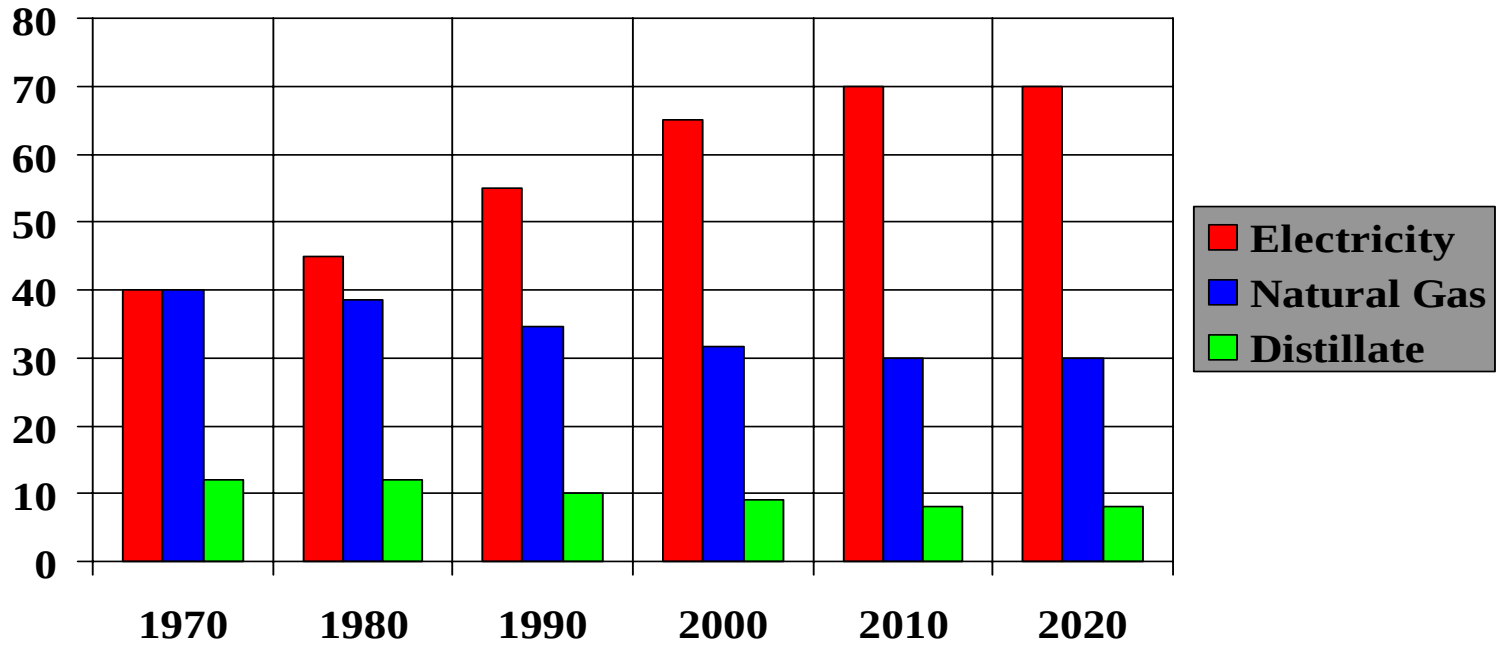
Strategies to Control Energy Costs

Diversified Energy Portfolio – A teamwork approach utilizing several different fuel sources.

Movement from a centralized to a decentralized electric generation, transmission and distribution system.

System Development

Agricultural Energy Consumption mmBtus Consumed by Fuel Source 1970-2020



System Development

Wind Energy is a Part of Our Basic Energy Strategy

Wind power is projected to produce five percent of the nation's electricity by 2020; twenty percent by 2030.

U.S. wind potential is over 10.7 trillion kWh/year.

Bowling Green Turbines

Vestas V80 1.8 Megawatt (MW) Turbines

Height - 391 Feet Tall

Max. Rotor Speed – 16 rpm

Variable Pitch Blades

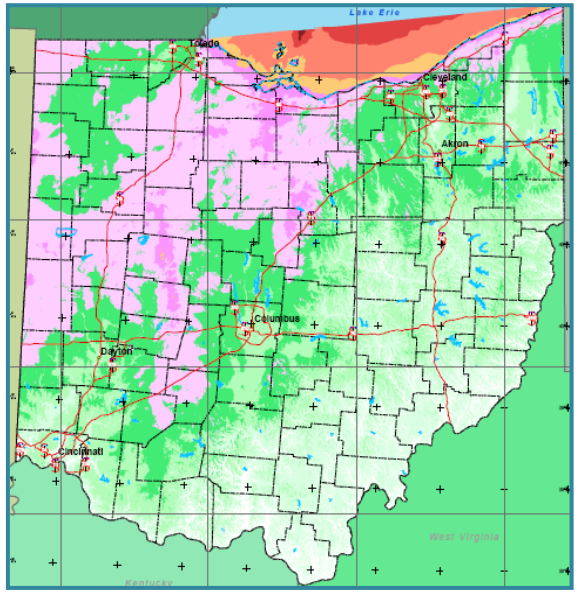
Cut-in Speed – 9 mph

Cut-out Speed – 56 mph

Planning and Involvement

Research and Evaluation

Available Resources: *Ohio Wind Resource Explorer*, plat maps, aerial images, topography, road maps, infrastructure, population and location.



On-site wind resource studies, environmental evaluations.

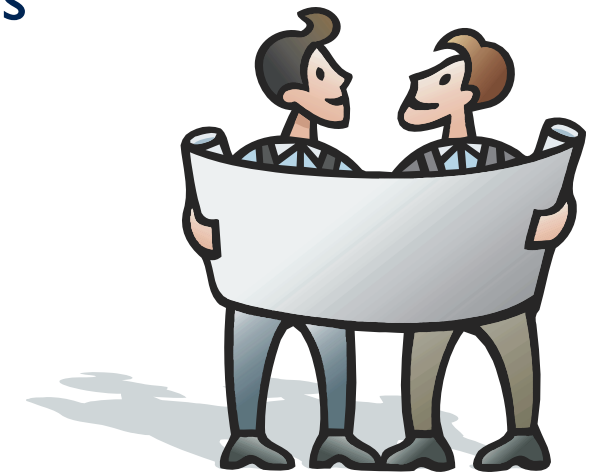
General Site Characteristics

Construction Area – 10 Open Acres

Operational Area (Footprint) – 2 Open Acres

Outside FAA Restricted Zones

Close Proximity to Electric Transmission Infrastructure



General Site Characteristics

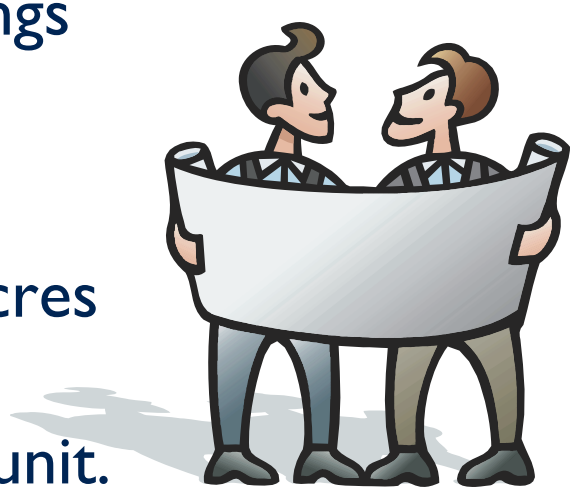
750 Feet from Public Roads

400 Feet from Property Lines

1000 Feet from Existing Buildings

800 Feet Between Turbines

A cluster of turbines on 300 acres of open land is ideal. More turbines equal lower cost per unit.

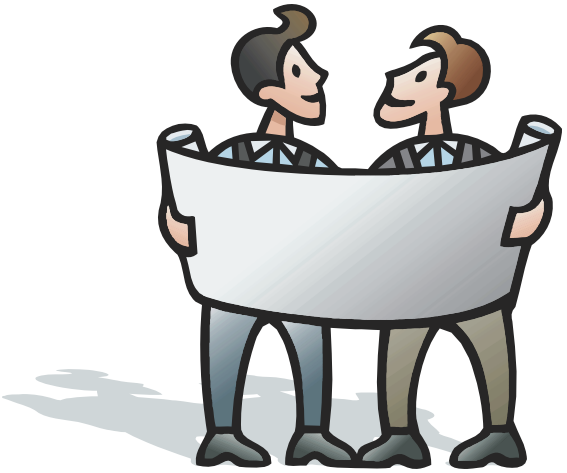


General Site Characteristics

Preferred sites are large farm fields and areas open to SW prevailing winds.

Factors that could eliminate a site include:

- Other Tall Structures
- Woodlots
- Wildlife Habitat
- Wetlands



Reasons for Concern

Endangered Species Act – Birds are not the only wildlife affected.

Environmental studies for birds, hibernacula and other wildlife.

ODNR and USFWS Cooperative Agreement Program

Advances in Technology

Monopole Construction Replaces Latticework Towers

Slower Rotational Speeds

Power Output per Utility-Scale Units now at Megawatt Levels

Basics of a Lease

Lessor will probably own the turbines.

Landowner paid on regular basis for the land occupied by the turbines.

Lessor responsible for maintaining turbines and repairing land after construction – Use Ohio Federation of SWCDs Remediation Standards as a basic guide.

Basics of a Lease

Landowner will allow access to lessor for repairs and maintenance at all times with an access road 16 – 20 feet wide.

Landowner can still use land around the turbines.

All payment provisions are detailed before signing the agreement.

Basics of a Lease

Ohio laws defining dedicated electric service areas prohibit "free electricity" provisions…

Turbines are used to supply intermediate load capacities. Don't rely on turbines to supply total energy needs.

Return land to original condition after turbine decommission.

Some Basic Economics

Potential Community Benefits

Land Lease Payments – $7,000/MW/year

Local Taxes - $10,000/MW/year

Short Term Jobs - 15/MW

Long Term Jobs - .6/MW

Some Basic Economics

Potential Community Benefits

Manufacturing – Ohio is second only to California in its capacity to manufacture wind turbine parts.

Green Collar Jobs – Manufacturing, construction, operations, and development.

Tax revenues and PILOT projects.

Planning and Involvement

Outreach

Many groups go to Bowling Green to investigate impact of wind turbine activity on the community.

Residents in viewscape have little problem with wind turbine activity.

New awareness for open, rural "working ground."

Planning and Involvement

Outreach

Coordinated efforts involving the developer, government and regulatory agencies at the township, county, state and in some cases, federal level, economic development and regional development authorities community groups.

Planning and Involvement

Action

Creation and development of a project that addresses environmental concerns considers aesthetic needs and provides economic benefits.

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