3/21/06

MODEL ORDINANCE
FOR WIND ENERGY FACILITIES
IN PENNSYLVANIA

1. TITLE

This Ordinance shall be known as the Wind Energy Facility Ordinance for _____ [*municipality*].

2. PURPOSE

The purpose of the Ordinance is to provide for the construction and operation of Wind Energy Facilities in [*municipality*], subject to reasonable conditions that will protect the public health, safety and welfare.

3. DEFINITIONS

A. "Applicant" is the person or entity filing an application under this Ordinance.

B. "Facility Owner" means the entity or entities having an equity interest in the Wind Energy Facility, including their respective successors and assigns.

C. "Operator" means the entity responsible for the day-to-day operation and maintenance of the Wind Energy Facility.

D. "Hub Height" means the distance measured from the surface of the tower foundation to the height of the Wind Turbine hub, to which the blade is attached.

E. "Occupied Building" means a residence, school, hospital, church, public library or other building used for public gathering that is occupied or in use when the permit application is submitted.

F. "Turbine Height" means the distance measured from the surface of the tower foundation to the highest point of the turbine rotor plane.

G. "Wind Turbine" means a wind energy conversion system that converts wind energy into electricity through the use of a wind turbine generator, and includes the nacelle, rotor, tower, and pad transformer, if any.

H. "Wind Energy Facility" means an electric generating facility, whose main purpose is to supply electricity, consisting of one or more Wind Turbines and other accessory structures and buildings, including substations, meteorological towers, electrical infrastructure, transmission lines and other appurtenant

structures and facilities.

I. "Non-Participating Landowner" means any landowner except those on whose property all or a portion of a Wind Energy Facility is located pursuant to an agreement with the Facility Owner or Operator.

4. APPLICABILITY

A. This Ordinance applies to all Wind Energy Facilities proposed to be constructed after the effective date of the Ordinance, except that this Ordinance is not intended to apply to stand-alone Wind Turbines constructed primarily for residential or farm use.

B. Wind Energy Facilities constructed prior to the effective date of this Ordinance shall not be required to meet the requirements of this Ordinance; Provided that any physical modification to an existing Wind Energy Facility that materially alters the size, type and number of Wind Turbines or other equipment shall require a permit under this Ordinance.

5. PERMITTED USE

A Wind Energy Facility shall be considered a _____ (*permitted use, conditional use* or *special exception*) in the following zones: _____.

6. PERMIT REQUIREMENT

A. No Wind Energy Facility, or addition of a Wind Turbine to an existing Wind Energy Facility, shall be constructed or located within _____ [*municipality*] unless a permit has been issued to the Facility Owner or Operator approving construction of the facility under this Ordinance.

B. The permit application or amended permit application shall be accompanied with a fee in the amount of $_____.

C. Any physical modification to an existing and permitted Wind Energy Facility that materially alters the size, type and number of Wind Turbines or other equipment shall require a permit modification under this Ordinance. Like-kind replacements shall not require a permit modification.

7. PERMIT APPLICATION

A. The permit application shall demonstrate that the proposed Wind Energy Facility will comply with this Ordinance.

B. Among other things, the application shall contain the following:

1. A narrative describing the proposed Wind Energy Facility, including an overview of the project; the project location; the approximate generating capacity of the Wind Energy Facility; the approximate number, representative types and height or range of heights of Wind Turbines to be constructed, including their generating capacity, dimensions and respective manufacturers, and a description of ancillary facilities.

2. An affidavit or similar evidence of agreement between the property owner and the Facility Owner or Operator demonstrating that the Facility Owner or Operator has the permission of the property owner to apply for necessary permits for construction and operation of the Wind Energy Facility.

3. Identification of the properties on which the proposed Wind Energy Facility will be located, and the properties adjacent to where the Wind Energy Facility will be located.

4. A site plan showing the planned location of each Wind Turbine, property lines, setback lines, access road and turnout locations, substation(s), electrical cabling from the Wind Energy Facility to the substation(s), ancillary equipment, buildings, and structures, including permanent meteorological towers, associated transmission lines, and layout of all structures within the geographical boundaries of any applicable setback.

5. Documents related to decommissioning.

6. Other relevant studies, reports, certifications and approvals as may be reasonably requested by the [*municipality*] to ensure compliance with this Ordinance.

C. Within (30) days after receipt of a permit application, the [*municipality*] will determine whether the application is complete and advise the applicant accordingly.

D. Within sixty (60) days of a completeness determination, the [municipality] will schedule a public hearing. The applicant shall participate in the hearing and be afforded an opportunity to present the project to the public and municipal officials, and answer questions about the project. The public shall be afforded an opportunity to ask questions and provide comment on the proposed project.

E. Within one hundred and twenty (120) days of a completeness determination, or within forty-five (45) days after the close of any hearing, whichever is later, the

[*municipality*] will make a decision whether to issue or deny the permit application.

F. Throughout the permit process, the Applicant shall promptly notify _____ [*municipality*] of any changes to the information contained in the permit application.

G. Changes to the pending application that do not materially alter the initial site plan may be adopted without a renewed public hearing.

8 DESIGN AND INSTALLATION

A. Design Safety Certification

The design of the Wind Energy Facility shall conform to applicable industry standards, including those of the American National Standards Institute. The Applicant shall submit certificates of design compliance obtained by the equipment manufacturers from Underwriters Laboratories, Det Norske Veritas, Germanishcer Llloyd Wind Energies, or other similar certifying organizations.

B. Uniform Construction Code

To the extent applicable, the Wind Energy Facility shall comply with the Pennsylvania Uniform Construction Code, 34 Pa. Code §§403.1 – 403.142.

C. Controls and Brakes

All Wind Energy Facilities shall be equipped with a redundant braking system. This includes both aerodynamic overspeed controls (including variable pitch, tip, and other similar systems) and mechanical brakes. Mechanical brakes shall be operated in a fail-safe mode. Stall regulation shall not be considered a sufficient braking system for overspeed protection.

D. Electrical Components

All electrical components of the Wind Energy Facility shall conform to relevant and applicable local, state and national codes, and relevant and applicable international standards.

E. Visual Appearance; Power Lines

1. Wind Turbines shall be a non-obtrusive color such as white, off-white or gray.

2. Wind Energy Facilities shall not be artificially lighted, except to the extent required by the Federal Aviation Administration or other applicable authority that regulates air safety.

3. Wind Turbines shall not display advertising, except for reasonable identification of the turbine manufacturer, Facility Owner and Operator. [*insert size limit if desired*].

4. On-site transmission and power lines between Wind Turbines shall, to the maximum extent practicable, be placed underground.

F. Warnings

1. A clearly visible warning sign concerning voltage must be placed at the base of all pad-mounted transformers and substations.

2. Visible, reflective, colored objects, such as flags, reflectors, or tape shall be placed on the anchor points of guy wires and along the guy wires up to a height of ten feet from the ground.

G. Climb Prevention/Locks

1. Wind Turbines shall not be climbable up to fifteen (15) feet above ground surface.

2. All access doors to Wind Turbines and electrical equipment shall be locked or fenced, as appropriate, to prevent entry by non-authorized persons.

9. SETBACKS

A. Occupied Buildings

1. Wind Turbines shall be set back from the nearest Occupied Building a distance not less than the normal setback requirements for that zoning classification or 1.1 times the Turbine Height, whichever is greater. The setback distance shall be measured from the center of the Wind Turbine base to the nearest point on the foundation of the Occupied Building

2. Wind Turbines shall be set back from the nearest Occupied Building located on a Non-participating Landowner's property a distance of not less than five (5) times the Hub Height, as measured from the center of the Wind Turbine base to the nearest point on the foundation of the Occupied Building.

B. Property lines: All Wind Turbines shall be set back from the nearest property line a distance of not less than the normal setback requirements for that zoning classification or 1.1 times the Turbine Height, whichever is greater. The setback distance shall be measured to the center of the Wind Turbine base.

C. Public Roads: All Wind Turbines shall be set back from the nearest public road a distance of not less than 1.1 times the Turbine Height, as measured from the right-of-way line of the nearest public road to the center of the Wind Turbine base.

10. WAIVER OF SETBACKS

A. Property owners may waive the setback requirements in 9(A)(2) (Occupied Buildings on Non-participating Landowner's property) and 9(B) (Property Lines) by signing a waiver that sets forth the applicable setback provision(s) and the proposed changes.

B. The written waiver shall notify the property owner(s) of the setback required by this Ordinance, describe how the proposed Wind Energy Facility is not in compliance, and state that consent is granted for the Wind Energy Facility to not be setback as required by this Ordinance.

C. Any such waiver shall be recorded in the Recorder of Deeds Office for the County where the property is located. The waiver shall describe the properties benefited and burdened, and advise all subsequent purchasers of the burdened property that the waiver of setback shall run with the land and may forever burden the subject property.

D. Upon application, the [*municipality*] may waive the setback requirement for public roads for good cause.

11. USE OF PUBLIC ROADS

A. The Applicant shall identify all state and local public roads to be used within the [*municipality*] to transport equipment and parts for construction, operation or maintenance of the Wind Energy Facility.

B. The [*municipality's*] engineer or a qualified third party engineer hired by the [*municipality*] and paid for by the Applicant, shall document road conditions prior to construction. The engineer shall document road conditions again thirty (30) days after construction is complete or as weather permits.

C. The [*municipality*] may bond the road in compliance with state regulations.

D. Any road damage caused by the applicant or its contractors shall be promptly repaired at the applicant's expense.

E. The Applicant shall demonstrate that it has appropriate financial assurance to ensure the prompt repair of damaged roads.

12. LOCAL EMERGENCY SERVICES

A. The Applicant shall provide a copy of the project summary and site plan to local emergency services, including paid or volunteer Fire Department(s).

B. Upon request, the Applicant shall cooperate with emergency services to develop and coordinate implementation of an emergency response plan for the Wind Energy Facility.

13. NOISE AND SHADOW FLICKER

A. Audible sound from a Wind Energy Facility shall not exceed fifty (55) dBA, as measured at the exterior of any Occupied Building on a Non-participating Landowner's property. Methods for measuring and reporting acoustic emissions from Wind Turbines and the Wind Energy Facility shall be equal to or exceed the minimum standards for precision described in AWEA Standard 2.1 - 1989 titled *Procedures for the Measurement and Reporting of Acoustic Emissions from Wind Turbine Generation Systems Volume I: First Tier.*

B. The Facility Owner and Operator shall make reasonable efforts to minimize shadow flicker to any Occupied Building on a Non-participating Landowner's property.

14. WAIVER OF NOISE AND SHADOW FLICKER PROVISIONS

A. Property owners may waive the noise and shadow flicker provisions of this Ordinance by signing a waiver of their rights.

B. The written waiver shall notify the property owner(s) of the sound or flicker limits in this Ordinance, describe the impact on the property owner(s), and state that the consent is granted for the Wind Energy Facility to not comply with the sound or flicker limit in this Ordinance.

C. Any such waiver shall be recorded in the Recorder of Deeds Office of the County where the property is located. The waiver shall describe the properties benefited and burdened, and advise all subsequent purchasers of the burdened property that the waiver of sound or flicker limit shall run with the land and may forever burden the subject property.

15. SIGNAL INTERFERENCE

The Applicant shall make reasonable efforts to avoid any disruption or loss of radio, telephone, television or similar signals, and shall mitigate any harm caused by the Wind Energy Facility.

16. LIABILITY INSURANCE

There shall be maintained a current general liability policy covering bodily injury and property damage with limits of at least $1 million per occurrence and $1 million in the aggregate. Certificates shall be made available to the [*municipality*] upon request.

17. DECOMMISSIONING

A. The Facility Owner and Operator shall, at its expense, complete decommissioning of the Wind Energy Facility, or individual Wind Turbines, within (12) twelve months after the end of the useful life of the Facility or individual Wind Turbines. The Wind Energy Facility or individual Wind Turbines will presume to be at the end of its useful life if no electricity is generated for a continuous period of twelve (12) months.

B. Decommissioning shall include removal of Wind Turbines, buildings, cabling, electrical components, roads, foundations to a depth of 36 inches, and any other associated facilities.

C. Disturbed earth shall be graded and re-seeded, unless the landowner requests in writing that the access roads or other land surface areas not be restored.

D. An independent and certified Professional Engineer shall be retained to estimate the total cost of decommissioning ("Decommissioning Costs") without regard to salvage value of the equipment, and the cost of decommissioning net salvage value of the equipment ("Net Decommissioning Costs"). Said estimates shall be submitted to the [*municipality*] after the first year of operation and every fifth year thereafter.

E. The Facility Owner or Operator shall post and maintain Decommissioning Funds in an amount equal to Net Decommissioning Costs; Provided, that at no point shall Decommissioning Funds be less than twenty five percent (25%) of Decommissioning Costs. The Decommissioning Funds shall be posted and maintained with a bonding company or Federal or Commonwealth chartered lending institution chosen by the Facility Owner or Operator and participating landowner posting the financial security, provided that the bonding company or

lending institution is authorized to conduct such business within the Commonwealth and is approved by the [*municipality*].

F. Decommissioning Funds may be in the form of a performance bond, surety bond, letter of credit, corporate guarantee or other form of financial assurance as may be acceptable to the [*municipality*].

G. If the Facility Owner or Operator fails to complete decommissioning within the period prescribed by Paragraph 17(A), then the landowner shall have six (6) months to complete decommissioning.

H. If neither the Facility Owner or Operator, nor the landowner complete decommissioning within the periods prescribed by Paragraphs 17(A) and 17(G), then the [*municipality*] may take such measures as necessary to complete decommissioning. The entry into and submission of evidence of a Participating Landowner agreement to the [*municipality*] shall constitute agreement and consent of the parties to the agreement, their respective heirs, successors and assigns that the [*municipality*] may take such action as necessary to implement the decommissioning plan.

I. The escrow agent shall release the Decommissioning Funds when the Facility Owner or Operator has demonstrated and the municipality concurs that decommissioning has been satisfactorily completed, or upon written approval of the municipality in order to implement the decommissioning plan.

18. PUBLIC INQUIRIES AND COMPLAINTS

A. The Facility Owner and Operator shall maintain a phone number and identify a responsible person for the public to contact with inquiries and complaints throughout the life of the project.

B. The Facility Owner and Operator shall make reasonable efforts to respond to the public's inquiries and complaints.

19. REMEDIES

A. It shall be unlawful for any person, firm, or corporation to violate or fail to comply with or take any action which is contrary to the terms of the ordinance, or any permit issued under the ordinance, or cause another to violate or fail to comply, or to take any action which is contrary to the terms of the ordinance or any permit issued under the ordinance.

B. If the [*municipality*] determines that a violation of the Ordinance or the permit has occurred, the [*municipality*] shall provide written notice to any person, firm, or

corporation alleged to be in violation of this Ordinance or permit. If the alleged violation does not pose an immediate threat to public health or safety, the [*municipality*] and the parties shall engage in good faith negotiations to resolve the alleged violation. Such negotiations shall be conducted within thirty (30) days of the notice of violation.

C. If after thirty (30) days from the date of the notice of violation the [*municipality*] determines, in its discretion, that the parties have not resolved the alleged violation, the [*municipality*] may institute civil enforcement proceedings or any other remedy at law to ensure compliance with the Ordinance or permit.