

WIND ENERGY CONVERSION SYSTEMS, INDUSTRIAL (IWECS) – An aggregation of parts including the base, tower, generator, rotor, blades, supports, guy wires and accessory equipment such as utility interconnect and battery banks, etc., in such configuration as necessary to convert the power of wind into mechanical or electrical energy, i.e., wind charger, windmill or wind turbine. The energy produced by such systems is intended for sale to large-scale energy providers through the grid system.

WIND ENERGY DEVICE – A wind energy conversion device (usually a turbine) that produces electricity. Turbines are typically manufactured as “Horizontal Axis” or “Vertical Axis”. Wind Energy Devices can be classified as industrial, agricultural, or domestic, see “INDUSTRIAL WIND ENERGY CONVERSION SYSTEMS”, AGRICULTURAL WIND ENERGY DEVICE, and “DOMESTIC WIND ENERGY CONVERSION SYSTEMS”.

WIND ENERGY DEVICE, AGRICULTURAL - A single wind energy device situated in an agricultural setting that is designed and intended to utilize wind power to generate electricity, or in the case of certain agricultural applications to power equipment or machinery, such as pumps, gears, wheels, mills, or similar mechanical devices incidental to farming. Energy produced by such devices is primarily intended for the use of the individual landowner upon whose property the device is situated. This use shall be limited exclusively to the ‘A’ and ‘C’ Districts.

WIND ENERGY DEVICE, DOMESTIC – A single wind energy device situated in a residential setting that is designed and intended to utilize wind power to generate electricity primarily for the use and/or benefit of the individual landowner upon whose property the device is situated. 10

WIND FARM, INDUSTRIAL – (Also referred to as “ARRAY”) Area arranged and dedicated to the construction and maintenance of more than one (1) Wind Energy Conversion System. The energy produced by such systems is intended for sale to large-scale energy providers through the grid system. 10

WIND TURBINE – See WIND ENERGY DEVICE.

Small/Residential/Agricultural/Community Scale Systems:

Wind Energy Conversion System (WECS)

(1) Buffer - A distance equal to two (2) times the height¹ of the structure from occupied buildings on adjacent lots. (The *height* of the structure is determined by the vertical distance from grade to nacelle.)

(2) Setback - A distance equal to the height of the structure from property lines of adjacent lots

§141-106. Wind Energy Conversion Systems Regulations. [Amended (Section Added) 06/04/2009 by CHR Bill 02-09 Amended, Effective 6/4/2009 ¹⁰]

A. Minimum separation distances. The following separation distances shall be maintained for industrial wind energy conversion systems:

- (1) One thousand (1,000) feet from any structure not the property of the applicant, provided that the structure includes no less than 600 square feet of occupiable space.
- (2) Two thousand (2,000) feet from any residential structure.
- (3) Five thousand (5,000) feet from all schools.
- (4) Five thousand (5,000) feet from any site listed on the National Register of Historic Places.

(5) One thousand (1,000) feet from the habitats of Rare, Threatened, or Endangered (RTEs) species as delineated on the Department of Natural Resources (DNR), Heritage Division Environmentally Significant Areas (ESAs) maps.

(6) Special Exception applications for Industrial WECS within five thousand (5,000) feet of the habitats of documented federally-endangered species shall include review and compliance documents from the U.S. Fish and Wildlife Services. Acceptable documents include: Finding of No Significant Impact (FONSI), Environmental Assessment (EA), or Environmental Impact Statement (EIS).

(7) Applicants opting to participate and abide by the recommendations of a DNR Environmental Review shall be exempt from the provisions of subsection A(5).

(8) Pursuant to the provisions of Section 141-75 C and 141-129, and with written authorization of all property owners within the prescribed separation area, applicants may seek a Variance in the required minimum separation distance prescribed in items (1) and (2) herein. At the discretion of the Board of Zoning Appeals, variance applications may be heard in conjunction with the Special Exception hearing.

(9) If the Board of Zoning Appeals finds that concerns regarding health, safety and welfare warrant additional separation, the Board may, at their discretion, increase prescribed separation distances by up to 50 percent.

B. Setback Requirements. The following setback requirements shall be required for all industrial wind energy conversion systems:

(1) Each individual IWECS with a height less than two hundred feet (200') shall observe a minimum setback distance equal to no less than one (1.0) times the height of the unit. Setback distances shall be measured from the base of the unit to property boundaries in all directions. Unit height shall be determined by measuring the unit from ground level at the base of the structure to the top of the nacelle.

(2) Each individual IWECS with a height greater than two hundred feet (200') but less than three hundred feet (300') shall observe a minimum setback distance equal to no less than two (2.0) times the height of the unit. Setback distances shall be measured from the base of the unit to property boundaries in all directions. Unit height shall be determined by measuring the unit from ground level at the base of the structure to the top of the nacelle.

(3) Each individual IWECS with a height greater than three hundred feet (300') shall observe a minimum setback distance equal to no less than three times (3.0) times the height of the unit. Setback distances shall be measured from the base of the unit to property boundaries in all directions. Unit height shall be determined by measuring the unit from ground level at the base of the structure to the top of the nacelle.

(4) Pursuant to the provisions of Section 141-75 C and 141-129, and with written authorization of all affected property owners, applicants may seek a Variance of up to 50 percent of the required minimum setback prescribed herein.

(a) Affected property owners shall be defined as owners of adjoining parcels whose boundaries are the subject of the Variance application.

(b) At the discretion of the Board of Zoning Appeals, Variance applications may be heard in conjunction with the Special Exception hearing.

(c) If the Board's findings determine that a Variance is warranted, any setback reduction which is authorized shall be instead of, not in addition to, any reductions which were authorized under the administrative adjustment provisions of Section F, herein.

(5) If the Board of Zoning Appeals finds that concerns regarding health, safety and welfare warrant additional setbacks, the Board may, at their discretion, increase prescribed setback distances by up to 50 percent.

C. Electromagnetic Interference.

(1) All applicants for industrial wind energy conversion systems shall be required to prepare and submit an Electromagnetic Interference Analysis (EIA), which shall be performed at the applicant's expense and in accordance with guidelines established by Zoning Administrator.

(2) Copies of the completed EIA shall be submitted to the following for comment:

(a) Allegany County Office of Emergency Management;

(b) Allegany County Department of Public Safety;

(c) All municipalities within a five (5)-mile radius;

(d) All emergency responders within a one (1)-mile radius, including police, fire, and rescue;

(e) Maryland State Police;

(f) Allegany County Bureau of Police;

(g) Owners of all telecommunications towers within a five (5)-mile radius;

(h) All radio stations operating within Allegany County or within a five (5)-mile radius if located outside of Allegany County;

(i) All radio, television, or satellite transmission entities with on-the-ground facilities, including transmissions towers, within Allegany County;

(j) All television stations operating within Allegany County or within a five (5)-mile radius if located outside of Allegany County;

(k) Federal Communications Commission

(l) Federal Aviation Administration

(3) A copy of the EIA shall be placed in all branches of the Allegany County Public Library and shall be posted on the Allegany County Government website.

(4) The applicant shall be required to abide by the recommendations and conditions of the EIA, and shall be required to satisfactorily address any concerns identified in the EIA.

(5) All entities identified in subsection C(2) shall have ninety (90) calendar days from the date of filing of the EIA to provide comments to the Allegany County Office of Land Development Services.

(6) The Zoning Administrator may impose additional conditions, including the elimination or reconfiguration of all or any part of the proposed project on the basis of the EIA and the responses received from the interested agencies identified in subsection C(2).

(7) Prior to receiving authorization for the construction of IWECs devices, the applicant shall post bond in the amount of One Hundred Thousand Dollars (\$100,000) to cover the costs of preparation of subsequent EIAs. Such subsequent EIAs shall be prepared under the direction and management of the Zoning Administrator in the event that there are reasonable complaints of electromagnetic interference after construction of the project. The applicant shall conform to all recommendations from such supplemental EIAs in order to reduce or eliminate any electromagnetic interference identified by the EIAs. Failure to do so within a reasonable time to be established by Allegany County shall result in forfeiture of the project bond and suspension of the authorization to operate the device.

(8) Any interference with public safety or emergency management communication shall constitute just cause for a temporary shutdown of the project until such time as a supplemental EIA can be completed.

(9) Repeated and substantiated claims of interference by those entities identified in subsection C(2) shall constitute just cause for a temporary shutdown of the project until such time as a supplemental EIA can be completed.

(10) All wind energy systems shall be required to comply with Federal Communications Commission interference regulations in accordance with Title 47, Chapter 1 of the Code of Federal Regulations.

D. Decommissioning Bond.

(1) Decommissioning provisions in this subsection shall apply to Industrial Wind Farms, or portions thereof.

(2) The IWECs facility owner or operator shall, at its expense, complete decommissioning of the IWECs facility within one hundred eighty (180) days of the cessation of facility operations. In the case of individual turbine units, the unit will presume to have ceased operations if no electricity is generated for a continuous period of one hundred eighty (180) days. For wind farms, the farm will presume to have ceased operations if no electricity is generated for a continuous period of one hundred eighty (180) days.

(3) Decommissioning shall include the removal and appropriate legal disposal or recycling of all IWECs components, including, but not limited to: turbines, support facilities, buildings, cables, electrical components, roads, concrete, fencing, gravel, stone and foundations to a depth of 36 inches.

(4) Disturbed earth in all areas shall be stabilized, graded and seeded. Restoration of the pad sites shall include replacing the excavated foundation areas with topsoil that is free of noxious weeds, with no rocks, root mat or foreign objects larger than two (2) inches in size, with proper soil nutrients (fertilizer, lime and other amendments) to provide and sustain growth.

(5) Prior to permitting, an independent and certified professional engineer shall be retained by the County to prepare a cost estimate for decommissioning, without regard to salvage value. All costs associated with this task shall be borne by the applicant.

(6) A bond equal to one hundred (100) percent of the above-referenced cost estimate shall be posted by the applicant for each wind energy device to be erected, and no permit shall be

issued until such bond is posted. Additionally, Construction Pricing Indexing (CPI) shall be applied to the cost estimate to ensure that cost increases during the five-year interval will not decrease the value of the bond.

(7) The bond shall be held by the Allegany County Finance Department to be used as surety in the event of non-compliance on the part of the applicant or in the event that the unit ceases operation for a period of time greater than one hundred eighty (180) days. In the event that the unit is sold, the bond shall be released if the new owner shall post a bond in an equal amount with the Allegany County Finance Department.

(8) In the event that the operator ceases to operate the unit or has abandoned the unit for a period in excess of one hundred eighty days (180), the County at its sole discretion may request that the unit be decommissioned and removed. In the event that the applicant does not comply with the request, the bond shall be utilized by Allegany County to cover the costs of decommissioning. The bond may further be utilized by the County for the costs of correcting any other acts of non-compliance with these regulations or directives of the County.

(9) In the event of a transfer of unit ownership, the County reserves the right to reassess the amount of the bond and request an additional amount to be posted in order to provide adequate surety. Any costs to the County associated with these activities shall be reimbursed by the current project owner or operator.

(10) Immediately following construction completion and every five (5) years thereafter, the County shall retain an independent and certified professional engineer to prepare a cost estimate for decommissioning, without regard to salvage value. All costs associated with this task shall be borne by the applicant or operator. The most recently-prepared cost estimate shall be compared to the amount currently under bond, and the County, at its sole discretion, may alter the bond amount to stay current with decommissioning cost estimates.

E. Groundwater Protection Bond

(1) A bond in an amount to be recommended by the Allegany County Health Department shall be posted by the applicant for each wind energy device to be erected, and no permit shall be issued until such bond is posted.

(2) The bond shall be held by the Allegany County Finance Department to be used as surety in the event of damage, disruption or loss of groundwater resources, specifically damage or disruption to groundwater resources or associated infrastructure utilized to provide potable water supply to occupied structures within one (1) mile of any portion of a IWECS project.

(3) Prior to construction authorization, the County Health Department shall take all necessary steps to verify that each structure utilizing on-site groundwater resources within a radius of one (1) mile of any portion of any IWECS project has received a Certificate of Potability.

(4) Prior to construction authorization, the County Health Department shall take all necessary steps to verify that each structure utilizing on-site groundwater resources within a radius of one (1) mile of any portion of any IWECS project is supplied with sufficient quantity as determined by re-charge rates, pressure and other appropriate standards as typically utilized by the Health Department.

(5) Within 12 months of IWECS construction completion, the County Health Department shall conduct sampling of each groundwater-supplied structure within one (1) mile of any portion of any IWECS project.

(6) If sampling indicates a change in quality or quantity, the Health Department shall engage well drillers and other experts, as necessary, to determine if the well has been compromised.

(7) If, in the opinion of the Health Department, the compromised well cannot be satisfactorily rehabilitated, a new well shall be drilled.

(8) Any new well must satisfy Health Department standards and receive a Certificate of Potability.

(9) In the event that these protocols fail to remedy the situation, the Health Department shall exercise other remedies as necessary.

(10) Costs associated with items (3) through (5) shall be supported through permit fees.

(11) Costs associated with items (6) through (8) shall be supported through the bond referenced in item (1).

(12) The bond shall be released upon satisfaction of County Health Department or the expiration of five (5) years, whichever comes first.

(13) Prior to the expiration of the above-referenced five (5) year time period, the County Health Department may, at their discretion, order additional bonding or extend the bonding period.

F. Supplemental Safety Provisions

(1) Applicants submitting for review, a Certificate by a qualified engineer attesting to the structural integrity of each IWECs and a Winds Load Analysis prepared by a qualified engineer, may be eligible for an administrative adjustment of up to twenty-five (25) percent of the required setbacks as specified in Section (B), herein.

(2) No IWECs shall incorporate any artificial exterior lighting except what is specifically required by the Federal Aviation Administration (FAA).

(3) In the event that the FAA requires daytime high intensity strobe lighting, a set of red or amber marker lights shall be installed for nighttime use. The red or amber lights shall replace daytime strobe lights from dusk until dawn. All high intensity strobe lights shall be turned off at twilight, subject to FAA requirements.

(4) Each turbine and all equipment and storage structures, facilities or enclosures shall be equipped with at least two access prevention locks. These devices shall be designed to prevent unauthorized access and personal injury. Applicants shall present as part of their permit application a detailed plan displaying the necessary hardware to defeat access.

(5) Each turbine and all equipment and storage structures, facilities or enclosures shall incorporate no less than two (2) Warning Signs. Each sign shall include the words: "Danger High Voltage" and shall include symbols or pictographs representing same. Any such signage shall be legibly discernible at a distance of fifty (50) feet.