ARTICLE 17 WIND ENERGY: **I. COMMERCIAL WIND ENERGY FACILITIES**
II. PRIVATE WIND ENERGY SYSTEMS

I. COMMERCIAL WIND ENERGY FACILITIES

SECTION 1700 COMMERCIAL WIND ENERGY FACILITIES

Defined as one or more wind turbines together with accessory buildings and equipment whose primary purpose is supplying electricity to **off-site customers**, will be permitted only in areas of agriculturally zoned land further designated as "Wind Overlay Districts" following:

1. Township site permit approval within a "Wind Overlay District".

2. Compliance with Huron County Building regulations together with any more restrictive Township regulations.

3. Assurance of compliance with all operational regulations with performance bonding in favor of Port Austin Township.

SECTION 1701 WIND OVERLAY DISTRICT

Is the designation by the Township of an area within an Agriculturally zoned district thought to be suitable for Commercial Wind Energy Development.

Generally it would include areas where large tracts of Agricultural land exist, where wind availability is sufficient to support utility scale wind development, and where property owners are desirous of encouraging wind energy development. Wooded acreage, wetlands, shoreline property suitable for residential or resort use, or land located near an airport are areas that should normally be excluded from any "wind overlay district".

Any applicant who advocates the creation of a wind overlay district must, in accordance with **Article 3, Section 303**, file an application together with the established fee with the Township Clerk. The Township clerk will then notify the Planning Commission and the Planning Commission will schedule a public hearing.

Applications should include:

a. Property identification numbers with owner's names and addresses.
b. Legal descriptions of property and surveys if available.
c. Aerial photographs/ or topographical maps.
d. Letters of consent/agreement from any landowner included in the proposed district but not a party to the application.
e. Information showing the current use and zoning of all adjacent properties.
f. Information about the impact or lack thereof regarding any endangered species or protected species.

Following a public hearing and deliberation, the Township Planning Commission will make its recommendation to the Township Board. If the Planning Commission approves the request to designate a certain area a "Wind Overlay District", they will notify the County Planning Commission of the proposed designation, and recommend to the Township Board that a zoning map change be implemented. Should either the Township Planning Commission or the Township Board fail to approve a requested "Wind Overlay District" zoning map designation, the applicant must be given a written statement of reasons for the denial.

SECTION 1702 SITE PERMITS

Because 'commercial wind energy facilities" are allowed by "special use" in Agricultural districts which are also designated "wind overlay districts," any applicant for the construction of a "commercial wind energy facility" must submit a site permit application to Township Clerk in accordance with **Article 3, Section 302.** Before scheduling a public hearing, the Planning Commission will require that the applicant provide the following information:

1. A survey of the property showing existing features such as contours, large trees, buildings, structures, roads (right-of-ways), utility easements, land use, zoning district, ownership of property, and vehicular access.

2. Plan(s) showing the location of proposed turbine towers, underground and overhead wiring (including depth of underground wiring), access roads (including width), substations and accessory structures.

3. A description of the routes to be used by construction and delivery vehicles and of any road improvements that will be necessary in the Township to accommodate construction vehicles, equipment or other deliveries, and an agreement for bonding which would guarantee the repair of damage to public roads and other areas caused by construction of the Wind Energy Facility.

4. Engineering data concerning construction of the tower and its base or foundation, which must be engineered and constructed in such a manner that upon removal of said tower, the soil may be restored to its original condition to a depth of six (6) feet.

5. Anticipated construction schedule.

6. A description of operations, including anticipated regular and unscheduled maintenance.

7. A preliminary plan, consistent with Township suggested guidelines, for a procedure to be followed in the event complaints arise from nearby residents/ land owners.

If the Planning Commission approves the preliminary "Wind Energy Facility" "special use" application, the Planning Commission will recommend that the Township Board grant the applicant's request for a site permit. If either the Planning Commission or the Township Board fail to approve the applicant's site permit application, they must provide the applicant with a written statement of the reasons for the denial.

SECTION 1703 COUNTY BUILDING REGULATIONS

Following "special use" site permit approval by the Township and prior to construction, the developer of a commercial wind facility must obtain a permit issued by the Huron County Building and Zoning Office and comply with all Huron County and any more restrictive Township regulations among which are :

1. ***Avian Analysis.*** The applicant shall submit an avian study to assess the potential impact of proposed Wind Energy Facilities upon bird and bat species. The avian study shall at a minimum report on a literature survey for threatened and endangered species, and any information on critical flyways. The applicant must identify any plans for post-construction monitoring or studies. The analysis should also include an explanation of potential impacts and propose a mitigation plan, if necessary.

2. ***Visual Appearance; Lighting; Powerlines***. The applicant shall use measures to reduce the visual impact of wind turbines to the extent possible, utilizing the following:
    a. Wind turbines shall be mounted on tubular towers, painted a non-reflective, non-obtrusive color. The appearance of turbines, towers and buildings shall be maintained throughout the life of the wind energy facility pursuant to industry standards (i.e., condition of exterior paint, signs, landscaping, etc.). A certified registered engineer and authorized factory representative shall certify that the construction and installation of the wind energy conversion system meets or exceeds the manufacturer's construction and installation standards.
    b. The design of the Commercial Wind Energy Facility's buildings and related structures shall, to the extent reasonably possible, use materials, colors, textures, screening and landscaping that will blend facility components with the natural setting and then existing environment.
    c. Commercial Wind Energy Facilities shall not be artificially lighted, except to the extent required by the FAA or other applicable authority, or otherwise necessary for the reasonable safety and security thereof.
    d. Wind turbines shall not be used for displaying any advertising except for reasonable identification of the manufacturer or operator of the Commercial Wind Energy Facility.
    e. The electrical collection system shall be placed underground within the interior of each parcel at a minimum depth of four (4) feet. If soil conditions make a depth of four (4) feet unattainable, the building inspector may relax this requirement. The collection system may be placed overhead adjacent to County roadways, near substations or points of interconnection to the electric grid or in other areas as necessary. Accurate maps indicating depth and location of all underground wiring must be filed with the County.

3. ***Setbacks, Separation and Security***. The following setbacks and separation requirements shall apply to all wind turbines within a Commercial Wind Energy Facility; provided, however, that a reduction to the standard setbacks and separation requirements may be permitted if the intent of this Article would be better served thereby.
    a. Inhabited structures: On a participating parcel, each wind turbine shall be set back from the nearest inhabited structure a distance of no less than one thousand (**1000)** feet. Where a wind energy facility is proposed in the vicinity of a non-participating parcel, each wind turbine shall be set back a distance no less than one thousand three hundred twenty (**1320)** feet ***from the property line of any non-participating parcel***. A reduced setback shall be considered only with written approval from the owner of property (non-participating parcel or inhabited structure) where a greater setback is indicated. Where a turbine within a Commercial Wind Energy Facility is located in the vicinity of a city or village, a setback of one thousand three hundred twenty (**1320**) feet from the city/village limits shall be required.

b. Property line setbacks: Excepting locations of public roads (see below), drain right-of-ways, parcels with inhabited structures and non-participating parcels wind turbines shall not be subject to a property line setback. Along the border of any Wind Energy Facility Overlay District, there shall be a setback distance equal to two (2) times the Hub Height of the wind turbine. Wind turbines and access roads shall be located so as to minimize the disruption to agricultural activity and, therefore, the location of towers and access routes is encouraged along internal property lines. Where a turbine location is proposed nearer to an internal property line than one and one-half (1.5) times the Hub Height of the wind turbine, an easement must be established on the abutting parcel(s).

c. Public Roads: Each wind turbine shall be set back from the nearest public road a distance no less than four hundred (400) feet or one and one-half (1.5) times its Hub Height, whichever is greater, determined at the nearest boundary of the underlying right-of-way for such public road.

d. Communication and electrical lines: Each wind turbine shall be set back from the nearest above-ground public electric power line or telephone line a distance no less than four hundred (400) feet or one and one-half (1.5) times its Hub Height, whichever is greater, determined from the existing power line or telephone line.

e. Tower separation: Turbine/tower separation shall be based on 1) industry standards, 2) manufacturer recommendation, and 3) the characteristics (prevailing wind, topography, etc.) of the particular site location. At a minimum, there shall be a separation between towers of not less than three (3) times the turbine (rotor) diameter; and, the Wind Energy Facility shall be designed to minimize disruption to farmland activity. 4) There shall be no more than three (3) turbines in any square mile (640 acres). Documents shall be submitted by the developer/manufacturer confirming specifications for turbine/tower separation.

f. Following the completion of construction, the applicant shall certify that all construction is completed pursuant to the Wind Energy Site Permit, Building Permit and, in addition, that appropriate security will be in place to restrict unauthorized access to Wind Energy Facilities.

4. ***Wind Turbine/Tower Height (Total Height):*** The total height of a wind turbine shall be the distance to the center of the hub of the wind turbine plus the distance to the tip of the turbine blade at its height point. Generally, the Hub Height shall be limited to three hundred thirty (330) feet from existing grade. The applicant shall demonstrate compliance with the Michigan Tall Structure Act (Act 259 of 1959, as amended) and FAA guidelines as part of the approval process.

5. ***Noise:***

a. On participating parcels, audible noise or the sound pressure level from the operation of a Commercial Wind Energy Facility shall not exceed fifty (50) dBA or the ambient sound pressure level plus five (5) dBA, whichever is greater, for more than ten percent (10%) of any hour, measured at any residence. On any non-participating parcel, audible noise or the sound pressure level from the operation of the Commercial Wind Energy Facility shall not exceed forty five (45) dBA, or the ambient sound pressure level plus five (5) dBA, whichever is greater, for more than ten percent (10%) of any hour, measured at any residence, school, hospital, church or public library existing on the date of approval of any Commercial Wind Energy Facility Site Permit. ***The applicant shall be able to provide sound pressure level measurements from a reasonable number of sampled locations at the perimeter and in the interior of the Wind Energy Facility to demonstrate compliance with this standard.***

b. In the event audible noise from the operation of the Commercial Wind Energy Facility contains a steady pure tone, the standards for audible noise set forth in subparagraph a) of this subsection shall be reduced by five (5) dBA. A pure tone is defined to exist if the one-third (1/3) octave band sound pressure level in the band, including the tone, exceeds the arithmetic average of the sound pressure levels of the two (2) contiguous one-third (1/3) octave bands by five (5) dBA for center frequencies of five hundred (500) Hz and above, by eight (8) dBA for center frequencies between one hundred and sixty (160) Hz and four hundred (400) Hz, or by fifteen (15) dBA for center frequencies less than or equal to one hundred and twenty-five (125) Hz.

c. The ambient noise level **absent any and all turbine noise** shall be expressed in terms of the highest whole number sound pressure level in dBA, which is exceeded for more than five (5) minutes per hour. Ambient noise levels shall be measured at a building's exterior of potentially affected existing residences, schools, hospitals, churches and public libraries. Ambient noise level measurement techniques shall employ all practical means of reducing the effect of wind-generated noise at the microphone. Ambient noise level measurements shall be performed when wind velocities at the proposed project site are sufficient to allow wind turbine operations, provided that the wind velocity does not exceed thirty (30) mph at the ambient noise measurement location.

d. Any noise level falling between two whole decibels shall be the lower of the two.

e. In the event the noise levels resulting from the Wind Energy Facility exceed the criteria listed above, a waiver to said levels may be approved provided that the following have been accomplished:

(1) Written consent from the affected property owner(s) has been obtained stating that they are aware of the Wind Energy Facility and the noise limitations imposed by this Article, and that consent is granted to allow noise levels to exceed the maximum limits otherwise allowed; and

(2) If the applicant wishes the waiver to apply to succeeding owners of the property, a permanent noise impact easement must be recorded in the Huron County Register of Deeds Office which describes the benefitted and burdened properties and which advises all subsequent owners of the burdened property that noise levels in excess of those otherwise permitted by the ordinance may exist on or at the burdened property.

6. ***Minimum Ground Clearance:*** The blade tip of any Wind Turbine shall, at its lowest point, have ground clearance of not less than seventy-five (75) feet.

7. ***Signal Interference:*** No Commercial Wind Energy Facility shall be installed in any location where its proximity with existing fixed broadcast, retransmission, or reception antennas for radio, television, or wireless phone or other personal communication systems would produce electromagnetic interference with signal transmission or reception. No Commercial Wind Energy Facility shall be installed in any location along the major axis of an existing microwave communications link where its operation is likely to produce electromagnetic interference in the link's operation.

8. ***Safety:***
   a. All collection system wiring shall comply with all applicable safety and stray voltage standards.
   b. Wind Turbine towers shall not be climbable on the exterior.
   c. All access doors to wind turbine towers and electrical equipment shall be lockable.
   d. Appropriate warning signs shall be placed on wind turbine towers, electrical equipment, and Commercial Wind Energy Facility entrances.

SECTION 1704 OPERATIONAL REGULATIONS

1. **CERTIFICATION.** Operation of a wind energy facility shall require certification of compliance; a certification report from the wind facility's owner/operator is required within twelve (12) months of the facility's initial operation (start-up) date. The post-construction certification report shall confirm the project's compliance with provisions of this code as well as all other all applicable laws and conformity with wind industry practices.

2. **INSPECTIONS.** The applicant (owner/operator) shall submit annual reports to the Huron County Planning Commission and the Port Austin Township Board or its designated officer confirming continued compliance with applicable codes or ordinances. This requirement shall not preclude Port Austin Township from undertaking a separate compliance report, where confirmation of data provided by the facility's operator is desired. The cost of a Township-sponsored report shall be reimbursed to the Township by the facility's owner/operator through an escrow fund established pursuant to the 'schedule of fees for commercial wind energy facilities', adopted from time-to-time by the Township Board.

3. **COMPLAINT RESOLUTION.** The Michigan Zoning Enabling Act allows a local unit of government to enact ordinance regulations to achieve specific land management objectives and avert or solve specific land use problems; see MCL 125.3201(3). **A description of a complaint resolution process must be established by the applicant of a wind energy facility permit as part of its initial application for zoning approval.** The process is intended to facilitate resolution of complaints concerning the construction or operation of the wind energy facility from nearby residents and/or property owners. The process may use an independent mediator or arbitrator and shall include a time limit for acting on a complaint. A complaint resolution process approved through a wind energy facility permit shall not preclude the Township from pursuing any and all appropriate legal action on a complaint.

   Port Austin Township suggests that a Complaint Resolution Process should include the following:

   a. Contact information for the wind energy owner/operator should be made easily available. A local or toll free telephone number should be provided in addition to an address (with contact person/ department) to be used for written correspondence.
   b. Telephone initiated complaints should be confirmed in writing. **All written complaints must be investigated within twenty-one (21) days of the receipt of the complaint. Within thirty (30) days of receipt of the complaint, the owner must forward to the complainant a proposed resolution of the complaint, or a detailed explanation as to why no action will be taken.**
   c. It shall be the responsibility of the complainant to document (by postal records) the date any written complaint is received by a wind energy facility owner/operator.
   d. Any agreement between the complainant and the owner/operator extending the time allowed for the resolution of a written complaint should also be in writing.
   e. If a complainant is not satisfied with the owner/operator's proposed resolution, the complainant may forward the complaint (in writing) to the Township Zoning Inspector. The Township Zoning Inspector will, within thirty days, investigate the complaint and determine if enforcement against the owner/operator for a Zoning Ordinance violation should be commenced. Written notice of his determination will be sent to the complainant.
   f. If the complainant disagrees with the decision of the Zoning Inspector, the decision may be appealed to the Township Zoning Board of Appeals.

   g. The Complaint Resolution process outlined herein is not intended to preclude the complainant from seeking any other legal right or remedy.

4. **DECOMMISSIONING.** The applicant shall submit a plan describing the intended disposition of the Wind Energy Facilities at the end of their useful life, and shall describe any agreement with the landowner regarding equipment removal upon termination of the lease. A performance bond or equivalent financial instrument to be utilized in the event the decommissioning plan needs to be enforced with respect to tower removal or site restoration shall be posted. The bond shall be in favor of Port Austin Township in an amount determined by the Township and may be provided jointly as a single instrument for multiple townships within a single wind farm, provided that any such single instrument shall be in an amount of at least one (1) million dollars and shall contain a replenishment obligation.

II. PRIVATE WIND ENERGY SYSTEMS

SECTION 1705 PRIVATE WIND ENERGY SYSTEMS

Are defined as systems smaller both physically and having less capacity to generate power than Commercial Wind Energy Facilities. These Wind Energy Systems are comprised of turbines less than one hundred fifty feet (150') in height with a capacity to generate a maximum of one hundred (100) kilowatts per hour. They are normally operated by the resident/owner of the property on which the system is located and designed to supply power primarily to that resident/owner. A system may be comprised of one to five wind turbines. The energy provided by such systems is usually supplemental to energy supplied by a commercial energy provider but may, by agreement with a commercial provider, at times generate excess power that is used elsewhere.

Private Wind Energy Systems are allowed either "By Right" or "By Special Approval" in all Zoning districts. Although some regulations vary according to zoning districts, in all districts the construction of a Private Wind Energy System requires a Site Permit issued by the Township.

SECTION 1706 SITE PLAN PERMIT REQUIREMENTS:

1. Applications for a site plan permit must include:
    a. The appropriate fee as set by the Township fee schedule.
    b. Name, address and contact information of the person on whose property the construction is proposed. The property identification number as well as the legal description of the property must be provided.
    c. A description of the proposed system which includes the manufacturer's name and model number, rotor diameter, tower height, tower type, total system height and maximum capacity.
    d. A map/sketch accurately depicting the proposed construction in relation to property lines along with any existing buildings, waterways, wetlands and/or county drains.
    e. Copies of written waivers from neighboring property owners if waivers are indicated.
    f. A copy of the modeling and analysis report from the manufacturer providing information about sound.
    g. Certification that the applicant will comply with all applicable state and federal laws and regulations, including all local building and electrical codes. Manufacturer's plans and specifications for foundations, tower design, roof mounting devices, etc. must be provided or, as an alternative, certification may be provided by a professional engineer licensed in the State of Michigan.

h. If the Wind Energy System will be connected to the grid, written indication that the electric utility company serving the area of the proposed construction is aware of the planned construction and is prepared to enter into an operating agreement.

SECTION 1707 CONSTRUCTION AND DESIGN REQUIRMENTS

1. Exterior Finish. ***Tower-mounted Private Wind Energy Systems***: shall typically maintain a neutral, non-reflective exterior color, or a galvanized steel finish, unless Federal Aviation Administration (FAA) or other applicable authority require otherwise. In addition, the Planning Commission may require that such Systems be painted in such a way as to reduce visual obtrusiveness, in order to conform to the surrounding environment and/or architecture.
   Roof-mounted Private Wind Energy Systems: systems and associated wires and equipment shall be painted so as to be architecturally compatible with the building to which they are attached.

2. Private Wind Energy Systems may ***not be artificially lighted*** unless otherwise required by the FAA or approved authority or authorized by the Planning Commission.

3. Private Wind Energy Systems may include one or more small signs, emblems, or decals to identify the name or logo of the manufacturer and/or installer, also the make, serial number, and other pertinent information about the wind energy conversion system. Such signs shall not contain advertising copy.

4. ***Minimum clearances:*** The minimum clearance between the mechanical shadow (lowest projection of blade/rotor or moving part) and ground at the base shall be fifteen (15) feet. The minimum clearance between the mechanical shadow and any nearby structure shall be ten (10) feet, excluding roof-mounted wind energy conversion systems.

5. Provisions for ***safety.***
   a. Towers that are not roof-mounted shall be enclosed with a six (6) foot tall fence ***or*** the base of the tower shall not be climbable for a distance of twelve (12) feet.
   b. When roof-mounted systems can be accessed by the public, adequate guards, gates, locks and/or warning devices, as determined by the building official, shall be provided to ensure safety.
   c. When towers are supported by guy wires (in approved areas) the wires shall be clearly visible to a height of at least six (6) feet above the guy wire anchors.
   d. Private Wind Energy Systems shall have automatic braking, governing or a feathering system to prevent uncontrolled rotation or movement.

6. ***Noise.*** A Private Wind Energy System shall not exceed forty-five (45) decibels (measured as dBA), as measured from the closest lot line. Product specifications & modeling shall be provided.

7. ***Unsafe or inoperative systems***. Any Private Wind Energy System found to be unsafe by the building official shall be repaired by the owner to meet all code requirements, or removed as directed.
   a. If any Private Wind Energy System is not used for a period of twelve (12) months, the owner will be notified by certified mail to set forth reasons for the operational difficulty and provide a reasonable timetable for corrective action. If one is not provided to the satisfaction of the Township, the landowner will be notified to remove the system within sixty (60) days. If the landowner fails to comply with the removal order, the Township may seek a court order to have the system removed and a court order assessing the cost of

said removal as a lien upon the landowner's property.

8. ***Signal Interference***. Private Wind Energy Systems shall not materially interfere with communication systems such as, but not limited to, radio, telephone, television, satellite, or emergency communication.

SECTION 1708 SPECIFIC DISTRICT REQUIREMENTS

1. Minimum lot size in all districts is one (1) acre.

2. Maximum height in all districts is one hundred fifty (150) feet.

3. Minimum property line setback requirement is two (2) times the hub height ***or*** the minimum setback required in the district for a primary building, whichever is greater.

4. Private Wind Energy Systems are allowed "by right" in Agricultural districts.

5. Private Wind Energy Systems require "special approval" use in Residential, Business or Industrial Districts.