SECTION 9.01 PURPOSE AND INTENT

This ordinance balances the need for clean renewable energy resources with the necessity to protect the public health, safety, and welfare of the community. Tuscola Township establishes these regulations to ensure that wind energy turbines (WETs) (*D*2-21) ***and other alternative energy systems*** are properly designed, safely sited, installed and decommissioned at the end of their useful life.

SECTION 9.02 WIND ENERGY SYSTEMS: CLASSES OF WIND ENERGY TURBINES PERMITTED

Two classes of wind energy turbines each with 2 sub-classes are permitted in Tuscola Township as follows:

A. The Personal Use Class (PUC) is primarily intended to serve the needs of the resident consumer for personal use. The 2 types of wind energy turbines in this class are:

   1. Structure-Mounted Wind Energy Turbines (SMWETs) (*D*2-20) up to a total height (*D*2-21) of 25 feet above roof peak.

   2. Small Tower Mounted Wind Energy Turbines (STWETs) (*D*2-21) up to a total height of 100 feet.

   Both Personal Use Class types may also be connected to the electric grid for distribution of excess power.

B. The Electric Grid Class (EGC) is primarily intended to supply power to the electric utility power grid. The type of wind energy turbines in this class include:

   1. Large Grid Wind Energy Turbines (LGWETs) (*D*2-19) up to a total height of 495 feet.

SECTION 9.03 WIND ENERGY SYSTEMS: TEMPORARY ANEMOMETER USE

Temporary use of an anemometer (*D*2-19) for measuring wind velocity to determine the feasibility of WET (*D*2-21) usage on a particular parcel (*D*2-13) of land is permitted in all zoning districts that are in compliance with this ordinance and applicable WET regulations as follows:

A. The construction, installation, or modification of an anemometer tower shall conform to all applicable Township, County, State, and Federal safety, construction, environmental, electrical, communications, and FAA requirements.

B. An anemometer must meet the minimum requirements for height, setback, separation, location, safety, and decommissioning (*D*2-19) requirements of this chapter that apply to the specific type of WET proposed for construction on the site as follows:

    1. Sections 9.04 through 9.07 for Personal Use Class WETs.

    2. Sections 9.04 and 9.08 through 9.14 for Electric Grid Class WETs.

C. Anemometer usage is permitted in Tuscola Township for a temporary period, or for the life of the Wind Energy Turbine project, depending on the needs of the applicant.

SECTION 9.04 WIND ENERGY SYSTEMS: REQUIREMENTS APPLICABLE TO ALL WIND ENERGY TURBINES

The following requirements apply to all WETs installed in Tuscola Township:

A. No WET shall be installed in any location where its proximity to existing fixed broadcast, retransmission, or reception antennae for radio, television, or wireless phone or other personal communication systems would produce electromagnetic interference with signal transmission or reception unless the applicant provides a replacement signal to the affected party that will restore reception to at least the level present before operation of the WET. No WET shall be installed in any location within the line of sight of an existing microwave communications link where operation of the wind energy system is likely to produce electromagnetic interference in the link's operation unless the interference is insignificant..

B. WET Siting and Design Requirements:

    1. Visual Appearance:
        a. A WET, including accessory structures (*D*2-1), towers, and related structures must be a non-reflective, non-obtrusive color (e.g. white, grey or black). The appearance of the turbine, and any ancillary facility must be maintained through the life of the WET.

b. Except as required by the FAA, artificial lighting of the WET is not permitted.

c. Use of the WET for display advertising (including flags, streamers, and decorative items) is not permitted, except for the identification of the manufacturer.

2. All WET installations shall not exceed 40 dB(A) measured as a 1-hour Leq. For Personal Use Class systems, sound measurements shall be from the property line closest to the wind energy system. For Electric Grid Class systems, sound measurements shall be made from non-participating property lines. This sound pressure level may be exceeded during short-term events such as utility outages and/or severe wind storms. If the ambient sound pressure level exceeds 40 dB(A), the standard shall be ambient dB(A) plus 5 dB(A). Additional requirements for Electric Grid Class systems are described further in Section 9.12.

3. When guy wires are used to support Wind Energy Towers (*D*2-21) the towers must have one or more seven-foot safety sleeves placed at each guy wire anchor point and have at least one orange marker ball attached to each guy wire.

C. Safety Requirements:

1. All WET (*D*2-21) installations must comply with applicable FAA regulations, including necessary approvals for installations near airports.

2. If the WET(s) is connected to a public utility system for net metering (*D*2-20) purposes, it must meet the requirements for interconnection and operation as set forth in the public utility's then-current service regulations meeting federal, state, and industry standards applicable to wind power generation facilities and the connection shall be inspected by the appropriate public utility.

3. All electrical connection systems and lines from a WET to the electrical grid connection shall be located and maintained underground. Burial depth shall be at a depth that causes no known environmental, land use, or safety issues. Depth shall be a minimum of sixty inches below grade, be deeper than drain tiles, and comply with the current version of the National Electrical Code. The Planning Commission may waive the burial requirement and allow above-ground structures in limited circumstances, such as geography precludes, or a demonstrated benefit to the Township. Waiver of these requirements shall not be granted solely on cost savings to the Applicant. The Planning Commission's consideration of the requested waiver shall consider aesthetics, future use of land, and potential effects on nearby landowners.

4. The WET(s) must be equipped with an automatic braking, governing, or feathering system to prevent uncontrolled rotation, over speeding, and excessive pressure

on the mounting structure, tower structure, rotor blades and other wind energy components.

5. The structure (*D2-20*) and integrity of the WET(s) must conform to the design standards of the International Electrical Commission, specifically IEC 61400-1, "Wind Turbine Safety and Design" IEC 61400-22 "Wind Turbine Certification," and IEC 61400-23 "Blade Structural Testing" or any similar successor standards.

6. All WET(s) must conform to all applicable electrical codes.

D. Decommissioning (*D2-19*) - All WETs must be decommissioned at the end of their useful life as follows:

1. WET (*D2-21*) Owner(s) (*D2-20*) or Operator(s) (*D2-20*) must complete decommissioning within 12 months after the end of the useful life. Upon request of the Owner(s) or assigns of the WETs, and for good cause, the Township Board (*D2-19*) may grant a reasonable extension of time. Any WET will presume to be at the end of its useful life if no electricity is generated for a continuous period of 12 months. All decommissioning expenses are the responsibility of the owners or operators.

SECTION 9.05 WIND ENERGY SYSTEMS: ADDITIONAL PERSONAL USE CLASS REQUIREMENTS

In addition to the requirements listed in Section 9.04 Personal Use Class WETs must meet the following requirements:

A. For all Personal use class WETs, the lowest extension of any moving part of a Personal Use WET must be at least 20 feet above the ground and above any outdoor surfaces intended for human use, such as balconies, roof gardens, driveways, and/or sidewalks located directly below a WET.

B. Personal Use Class systems must have a clearly visible warning sign regarding voltage placed at the base of the WET.

C. In addition to the requirements in "A" and "B" above, Structure-Mounted WETs (*D2-21*) are subject to the following:

1. The total height (*D2-21*) of a SMWET (*D2-20*) must not exceed 25 feet as measured from the highest point of the roof, excluding chimneys, antennae, and other similar protuberances.

2. The location of the SMWET must be no closer to the property line (D2-14), public right-of-way (D2-14), public easement (D2-7), or overhead utility lines than 1.5 times its total height from the ground.

3. The SMWET must not be affixed to the wall or side of a structure (D2-20).

4. No more than 1 SMWET per building (D2-2) may be installed on residences and accessory buildings on the parcel (D2-13) of land. An attached garage is an accessory building for mounting 1 SMWET.

D. In addition to the requirements in "A" and "B" above in this Section and in Section 9.04, Small Tower Mounted WETs are subject to the following:

1. The total height of the STWET (D2-21), measured from the ground to the tip of a blade at its highest point, must not exceed 100 feet.

2. The location of the STWET must be no closer to the property line setback, public right-of-way (D2-14), public easement (D2-7), or overhead utility lines than its total height from the ground.

3. Only 1 STWET is permitted on any property parcel.

4. When a Small Tower Mounted WET (STWET) is decommissioned the following requirements must be met:
   a. Decommissioning (D2-19) must include the removal of each STWET, tower, buildings, electrical components, and any associated facilities. Any foundation must be removed to a minimum depth of 60 inches below grade, or to the level of bedrock if less than 60 inches below grade.
   b. The site and any disturbed earth shall be stabilized, graded, and cleared of any debris by the owner(s) or operator(s) of the facility or its assigns. If the land is not to be used for agricultural practices following the removal, the site must be seeded to prevent soil erosion.

SECTION 9.06 WIND ENERGY SYSTEMS: FAILURE TO DECOMMISION PERSONAL USE CLASS WETS

If the Personal Use Class WET (D2-21) Owner(s) (D2-20) or Operator(s) (D2-20) fails to complete decommissioning (D2-19) within the period described 9.04.D.1, the Township Board (D2-19) may designate a contractor to complete decommissioning with the expense thereof to be charged to the violator and/or to become a lien against the premises. If the Personal Use Class WET(s) is not owned by the property owner(s), a bond must be provided to Township Board for the cost of decommissioning each Personal Use Class WET.

SECTION 9.07 WIND ENERGY SYSTEMS: PERSONAL USE CLASS PERMIT APPLICATION REQUIREMENTS

Personal Use Class WETs are permitted by right in all zoning districts when the proposed WET meets the requirements of this ordinance. However, a zoning permit is required before Tuscola County will issue a building permit.

A Personal Use Wind Energy Turbine Zoning Permit application for Personal Use Class WETs must be submitted to the Zoning Administrator. The permit application requires the following:

A. Name of property owners, address, and parcel (*D*2-13) number.

B. The signature of the applicant(s) and the property owner(s) if other than the applicant.

C. Applications for SMWETs (*D*2-20) must include the number and location(s) of the SMWETs.

D. A site plan (*D*2-18) including a detailed drawing showing the proposed location of all components and ancillary equipment of the SMWET(s) or STWET (*D*2-21), property lines, physical dimensions of the property, existing building(s) (*D*2-2), setback lines (*D*2-14), right-of-way (*D*2-14) lines, public easements (*D*2-7), overhead utility lines, any sidewalks, roads, and contours. The site plan must also depict adjoining properties.

E. Other relevant information as may be reasonably requested.

F. Notarized signature(s) of the property owners(s).

SECTION 9.08 WIND ENERGY SYSTEMS: LARGE ELECTRIC GRID CLASS WET REQUIREMENTS

Large Electric Grid Class Wind Energy Turbines are conditional uses as follows:

A. Large Electric Grid Wind Energy Turbines (LGWETs) (*D*2-19) are permitted as a conditional use in the agricultural, commercial, and industrial zoning districts where the property parcel (*D*2-13) dimensions meet the requirements of this ordinance.

The LGWET use will need to be added as a conditional use in Section 8.03(A)(3) for Agricultural, Section 8.03(G)(3) for Commercial, Section 8.03(H)(3) for Industrial, and to the table in Section 8.05.

SECTION 9.09 WIND ENERGY SYSTEMS: ELECTRIC GRID WET SITING AND DESIGN REQUIREMENTS

In addition to the Requirements in Section 9.04 the following requirements apply to Large Electric Grid Class WETs:

A. The design of Large Electric Grid Class WETs must conform to all applicable industry standards.

B. The Large Electric Grid Class WET owner(s) (*D*2-20) or operator(s) (*D*2-20) shall model and conduct an analysis on potential shadow flicker (*D*2-20) at any occupied building (*D*2-20) with direct line-of-site to the LGWET. The model and analysis shall be incorporated into a report that is submitted to the Planning Commission and must identify the locations of shadow flicker that may be caused by the project and the expected durations of the flicker at these locations from sun-rise to sun-set over the course of a year. The model and analysis shall confirm that shadow flicker does not exceed 30 hours per year at any occupied building.

C. Electrical systems must conform to the safety requirements of Section 9.04.C of this chapter.

D. In addition to the requirements listed in 9.04 and in "A", "B", and "C" above in this Section, a LGWET (*D*2-19) is also subject to the following:

1. The lowest extension of any blade or other exposed moving component of a LGWET must be at least 50 feet above the ground (at the highest point of the grade level within 150 feet of the base of the tower).

2. The number of LGWETs permitted on a parcel of land is to be determined by the setback and separation requirements.

3. Setback and separation requirements:
    a. Each LGWET must be setback from non-participating parcels and public road right-of-ways (*D*2-14)a minimum of 2 times its total height, or 1,000 feet as measured from the base of the tower, whichever is greater.
    b. A setback for a wind turbine from the property lines of adjacent participating property is not required.
    c. Maintenance and operations building(s), substation(s), and ancillary building(s), shall comply with the setback requirements of the underlying zoning district. Such structures shall be located at least 500 feet from non-participating parcels.
    d. LGWETS located on parcels that border Township boundary lines must be setback at distance of 2 times the total height of tower.
    e. LGWET Tower separation must be based on industry standard and manufacturer recommendations.

4. Construction of a private driveway to permit Township and emergency vehicles access to the tower base is required.

SECTION 9.10 WIND ENERGY SYSTEMS: LARGE ELECTRIC GRID CLASS WET SAFETY REQUIREMENTS

In addition to the Safety Requirements listed in Section 9.04.C of this chapter, Large Electric Grid Class WETs must comply with the following:

A. Security measures must be in place to prevent unauthorized trespass access. Each Large Electric Grid WET must not be climbable up to 15 feet above ground surfaces. All access doors to Large Electric Grid WETs and electrical equipment must be locked and/or fenced as appropriate, to prevent entry by unauthorized person(s).

B. Each Large Electric Grid WET must have 1 sign, not to exceed 2 square feet in area, posted at the base of the tower and on the security fence if applicable. The sign must contain the following:

   1. Warning High Voltage

   2. Manufacturer's name and owner/operators (*D*2-20) name.

   3. Emergency contact numbers (more than 1 number must be listed).

C. The signal interference requirements listed in Section 9.04.A of this chapter apply to all LGWETs.

D. Lighting:

   1. Large Electric Grid WET towers shall not be illuminated unless required by the Federal Aviation Administration (FAA).

   2. When illumination is required by the FAA, Large Electric Grid WET towers shall incorporate an Aircraft Detection Lighting System (ADLS).

   3. All tower lighting required by the FAA shall be shielded to the maximum extent possible to reduce glare and visibility from the ground. Continuous nighttime lighting systems are not allowed.

SECTION 9.11 WIND ENERGY SYSTEMS: DECOMMISSIONING OF LARGE ELECTRIC GRID WETs

In addition to the requirements of Section 9.04.d the following regulation apply to Large Electric Grid WETs:

A. All access driveways to decommissioned Large Electric Grid WETs shall be removed, cleared, and graded by the WET (*D*2-21) owner(s) unless the property owner(s) request, in writing, a desire to maintain the access driveway. The Township will not be assumed to take ownership of any access driveway unless through official action of the Township Board (*D*2-19).

B. Following removal, the location of any remaining WET foundation must be identified on a map as such and recorded with the deed at the Tuscola County register of deeds office.

C. If the Large Electric Grid Class WET Owner(s) (*D*2-20) or Operator(s) (*D*2-20) fails to complete decommissioning (*D*2-19) within the period described in Section 9.04.D of this chapter, the Township Board may designate a contractor to complete decommissioning with the expense thereof to be charged to the violator and or to become a lien against the premises. If the WET(s) is not owned by the property owner(s), a bond must be provided to Township Board for the cost of decommissioning each WET.

D. An independent and certified professional engineer will be retained by the owner(s) or operator(s) to estimate the total cost of decommissioning ("Decommissioning Costs") with no regard to salvage value of the equipment, and the cost of decommissioning net salvage value of the equipment ("Net Decommissioning Costs"). When determining this amount, the township may also require an annual escalator or increase based on the Federal Consumer Price Index (or equivalent or its successor). Said estimates will be submitted to the Tuscola Township Supervisor after the first year of operation and every fifth year thereafter.

E. The Large Electric Grid Class WET Owner(s) or Operator(s) must post and maintain Decommissioning Funds in a amount equal to total cost of decommissiong; provided, that at no point shall the Decommissioning Funds be less than 100% of Decommissioning Costs. The Decommissioning Funds will be posted and maintained with a bonding company or Federal or State chartered lending institution chosen by the owner(s), or operator(s) and participating land owner(s) posting the financial security. Providing, the bonding or lending institution is authorized to conduct such business and is approved by Tuscola Township.

F. Decommissioning Funds must be in the form of a performance bond payable to Tuscola Township.

G. A condition of the bond must be notification by the bond company to the Tuscola Township Supervisor when the bond is about to expire or be terminated.

H. Failure to keep the bond in effect while an Large Electric Grid Class WET is in place will be a violation of the conditional land use permit. If a lapse in the bond occurs, Tuscola Township may take action up to and including requiring ceasing operation of the WET until the bond is reposted.

I. The escrow agent shall release the Decommissioning Funds when the owner(s) or operator(s) have demonstrated and the township concurs that decommissioning has been satisfactorily completed, or upon written approval of Tuscola Township in order to implement the decommissioning plan.

J. If neither the owner(s) or operator(s), nor the landowner(s) complete decommissioning (*D*2-19) within the periods specified in Section 9.04.D.1 of this chapter, then the township may take such measures as necessary to complete decommissioning. The entry into and submission of evidence of a Participating Landowner agreement (*D*2-20) to the township shall constitute agreement and consent of the parties to the agreement, their respective heirs, successors and assigns that Tuscola Township may take such action as necessary to implement the decommissioning plan.

SECTION 9.12 WIND ENERGY SYSTEMS: LARGE ELECTRIC GRID CLASS WET SITE PLAN REQUIREMENTS

Site plan (*D*2-18) review by the Planning Commission in compliance with chapter 10 and a public hearing in compliance with Section MCL125.3103 being the Michigan Zoning Enabling Act, PA 110 of 2006 as amended is required for Large Electric Grid WETs (*D*2-21). The site plan review will comply with the Conditional Use Permit Review Process detailed in Chapter 11 of this Ordinance. At Tuscola Township's discretion, a qualified wind energy expert may be retained to assist with site plan evaluation. The cost of this assistance will be the responsibility of the owners or operators. To prepare for the public hearing, the Planning Commission must be provided with the following at least 1 month before the site plan review:

A. All applications for a Large Electric Grid Class WET conditional use permit must be accompanied by a detailed site plan map that is drawn to scale and dimensioned, displaying the following information:

1. Existing property features including property lines, physical dimensions of the property, land use, zoning district, contours, setback lines (*D*2-14), right-of-ways (*D*2-14), public and utility easements (*D*2-7), public roads, access roads (including width) sidewalks, non-motorized pathways, large trees, and all buildings (*D*2-2). The site plan must also include the adjoining properties as well as the location and use of all structures within 300 feet of the property.

2. Location and height of all proposed Large Electric Grid WETs, buildings, structures, ancillary equipment, underground utilities and their depth, towers, security fencing, access roads (including width, composition, and maintenance plans), electrical

sub-stations, and other above-ground structures and utilities associated with the proposed WET.

3. All electrical collection lines that are part of a Large Electric Grid WET shall be located and maintained underground, buried to a minimum depth of sixty inches below grade.

4. Additional details and information as required by the conditional use requirements of this Zoning ordinance (*D2-23*) as required by Section 10.03.

B. The following site plan (*D2-18*) documentation must be included with the site plan:

1. The contact information for the owner(s) (*D2-20*) and operator(s) (*D2-20*) of the Large Electric Grid WET(s) (*D2-21*)..

2. A copy of the lease, or recorded document, with the landowner(s) if the applicant does not own the land for the proposed Large Electric Grid WET(s).

3. Identification and location, including parcel numbers, of the properties on which the proposed Large Electric Grid Class WET(s) will be located.

4. The proposed number, representative types and total height (*D2-21*) of each Large Electric Grid Class WET to be constructed; including their manufacturer and model, product specifications including maximum noise output (measured in decibels (*D2-19*)), total rated capacity, rotor diameter (*D2-20*), and a description of ancillary facilities.

5. Documented compliance with the noise and shadow flicker (*D2-20*) requirements of this ordinance.

   i. Noise Requirements:

   - A post-construction study documenting sound pressure level measurements shall be provided to the Planning Commission within 6 months from the commencement of operation of the Large Electric Grid Class WET.

   - All Large Electric Grid Class WET installations shall not exceed 40 dB(A) measured as a 1-hour Leq.

   - Sound measurements shall be made from non-participating property lines.

- The sound pressure level may be exceeded during short-term events such as utility outages and/or severe wind storms.

- If the ambient sound pressure level exceeds 40 dB(A), the standard shall be ambient dB(A) plus 5 dB(A).

- At a minimum, three measurement locations within the project area and three measurement locations at the periphery of the project area shall be selected, for a minimum of six total measurement locations.

- The measurement period shall be four hours minimum at each location and shall be continuously observed by a trained attendant.

- Measurements shall be supervised by third-party personnel who are well-qualified by training and experience in measurement and evaluation of environmental sound and are Board Certified members of the Institute of Noise Control Engineering (INCE).

- Unattended measurements that are performed may be submitted with the study but only as supplementary data.

- Measurement devices shall comply with the following requirements:

    - A sound level meter or alternative sound level measurement system used shall meet all of the Type 1 performance requirements of American National Standard Specifications for Sound Level Meters, ANSI S1.4.
    - An integrating sound level meter (or measurement system) shall also meet the Class 1 performance requirements for integrating/averaging in the International Electrotechnical Commission Sound Level Meters, IEC Publication 61672-1.

    - An acoustical calibrator shall be used of a type recommended by the manufacturer of the sound level meter and that meets the Type 1 performance requirements of American National Standard Specification for Acoustical Calibrators, ANSI S1.40.

    - A microphone windscreen shall be used of a type that meets or exceeds the recommendations of manufacturer of the sound level meter.

- The sound level meter shall have been calibrated by a laboratory within 24 months of the measurement, and the microphone's response shall be traceable to the National Bureau of Standards.

- The sound level meter shall be used with the fast meter response and sampling frequency of one sample per second.

- Anemometer(s) used for surface wind speeds shall have a minimum manufacturer specified accuracy of ±1 miles per hour providing data in five second integrations.

- Compass used for surface wind direction shall have a minimum manufacturer specified accuracy of ±3º providing data in five second integrations.

- Thermometer used for surface temperature shall have a minimum manufacturer specified accuracy of ±2ºC providing data in five second integrations.

- A digital recording device used to store the time waveform of sound pressure levels shall comply with the requirements of ANSI/ASA S1.13.

- Required minimum study contents

  - A narrative description of the sound from the Large Electric Grid Class WET for the compliance measurement period result.

  - A narrative description of the sound measurements collected.
  - A map showing the wind turbine locations and noise measurement locations.

  - The dates, days of the week, and hours of the day when measurements were made.

  - The wind direction and speed, temperature, precipitation, and sky conditions for each 4-hour measurement interval. Meteorological measurements of the wind speed and direction shall be documented. Both the average and maximum wind speeds for each 3-hour measurement interval shall be reported.

  - Identification of all measurement equipment by make, model, and serial number.

- All meteorological, sound, windscreen, and audio instrumentation specifications and calibrations.
- All A-weighted sound level measurements for each 4-hour measurement interval.
- All attendant's notes and observations.
- Audio recordings may be submitted for identification of intrusive noise events. Audio collection shall occur through the same microphone/sound meter as the measurement data. Audio recordings shall be time stamped (hh:mm:ss), at an adequate quality for identifying events, and in the MP3 format.
- All periods removed from the data due to temperatures above or below manufacturer specifications, and wind speeds above ANSI S12.18 limits.

ii. Shadow Flicker Requirements: See Section 9.09.

6. Engineering data concerning construction of the Large Electric Grid WET(s) and its base foundation, which may include, but not be limited to, soil boring data.

7. A certified registered engineer must certify that the Large Electric Grid WET(s) meets or exceeds the manufacturer's construction and installation standards.

8. Anticipated construction schedule.

9. A copy of the maintenance and operation plan, including anticipated regular and unscheduled maintenance. Additionally, a description of the procedures that will be used for lowering or removing the Large Electric Grid Class WET(s) to conduct maintenance, if applicable.

10. Documented compliance with Township, County, State, and Federal regulations including, but not limited to, all applicable safety, construction, environmental, electrical, and communications. The Large Electric Grid class WET(s) must comply with the Federal Aviation Administration (FAA) requirements, Michigan Airport Zoning Act, Michigan Tall Structures Act, and any applicable airport (*D*2-1) overlay zoning regulations.

11. Proof of liability insurance covering the WET(s) (*D*2-21), to be submitted annually

12. Evidence that the utility company has been informed of the customer's intent to install an interconnected, customer-owned generator and that such connection has been approved. Off-grid systems are exempt from this requirement.

13. Other relevant information as may be requested by Tuscola Township to ensure compliance with the requirements of this ordinance.

14. Within 180 days after the completion of construction, the applicant must certify through the submittal of as-built drawings that all construction is completed pursuant to the conditional use permit and approved site plan (*D*2-18).

15. A written description of the anticipated life of each Large Electric Grid class WET; the estimated cost of decommissioning (*D*2-19); the method of ensuring that funds will be available for decommissioning and site restoration; and removal and restoration procedures and schedules will be employed if the Large Electric Grid Class WET(s) become inoperable or non-functional.

16. The applicant will submit a decommissioning plan that will be carried out at the end of the Large Electric Grid Class WET(s) useful life, and any agreement with the landowner(s) that regarding equipment removal upon termination of the lease.

17. Tuscola Township reserves the right to review all maintenance plans and bonds under this ordinance to ensure that all conditions of the conditional use permit are being followed.

18. A completed application for an Electric Class WET(s) zoning permit.

19. In addition to the Site Plan Requirements of Section 10.03 of this ordinance, the LGWET(s) (*D*2-19) will be subject to the following:
    a. A site grading, erosion control, and storm water drainage plan will be submitted along with the site plan to the Planning Commission prior to issuing a Conditional use permit for a LGWET. At the township's discretion the township's engineering firm may review these plans. The cost of this review will be the responsibility of the applicant.
    b. A description of the routes to be used by construction and delivery vehicles and any road improvements (*D*2-9) that will be necessary to accommodate construction vehicles, equipment or other deliveries, and an agreement or bond that guarantees the repair of damage to public roads and other areas caused by construction of the LGWET(s) (*D*2-19).
    c. A statement indicating what hazardous materials will be used and stored on the site, including all Material Safety Data Sheets (MSDS).
    d. A study assessing any potential impacts on the natural environment, including, but not limited to, assessing the potential impact on endangered species, eagles, birds, bats, and/or other wildlife,

wetlands, and fragile ecosystems. The study must conform to County, State, and Federal wildlife and natural resources agency recommendations based on local conditions.

SECTION 9.13 WIND ENERGY SYSTEMS: CERTIFICATION AND COMPLIANCE

A. Tuscola Township must be notified of a change in ownership of a Large Electric Grid Class WET or change in the ownership of the property on which the WET (*D*2-21) is located within 90 days of the change.

B. The township reserves the right to inspect any and all Large Electric Grid Class WETs, in order to ensure compliance with this ordinance. Any cost associated with the inspections will be paid by the owner/operator (*D*2-20) of the WET. In addition to the above Certification and Compliance requirements, Large Electric Grid Class WETs will be subject to the following:

1. The Large Electric Grid Class WET owner(s) and operator(s) must provide the Township Clerk with a copy of the yearly maintenance inspection.

SECTION 9.14 WIND ENERGY SYSTEMS: LARGE ELECTRIC GRID CLASS WET INQUIRIES AND COMPLAINTS

A) Aggrieved property owners that allege that a Large Electric Grid WET is not in compliance with the noise requirements of this ordinance, the following procedure must be followed:

1. Notify Tuscola Township Zoning Administrator in writing regarding concerns about the noise level.

2. If the complaint is deemed sufficient to warrant an investigation by Tuscola Township, the Township will notify the aggrieved property owner to deposit funds in an amount sufficient to pay for a noise level test conducted by a certified acoustic technician to determine compliance with the requirements stated in section 9.04.B3.

3. If the test indicates that the noise level is within ordinance noise requirements, Tuscola Township will use the deposit to pay for the test.

4. If the WET owner(s) is in violation of the ordinance noise requirements, the owner(s) must reimburse Tuscola Township for the noise level test and take immediate action to bring the WET into compliance that may include ceasing operation of the WET until ordinance violations are corrected. Tuscola Township will refund the deposit to the aggrieved property owner.

B) Aggrieved property owners that allege a Large Electric Grid Class WET is not in compliance with the shadow flicker (*D*2-20) requirements of this ordinance should:

1. Notify Tuscola Township in writing regarding concerns about the amount of shadow flicker.

2. If the compliant is deemed sufficient by the township to warrant an investigation, the township will request the owner(s) (*D*2-20) to provide an independent engineer's shadow flicker analysis of the WET as constructed to determine compliance with the requirements of this ordinance.

3. If the Large Electric Grid Class WET owner(s) is in violation of ordinance shadow flicker requirements, the owner(s) must take immediate action to bring the WET into compliance that may include ceasing operation until the ordinance violation is corrected.

THIS PAGE INTENTIONALLY LEFT BLANK