

## Chapter 9 – Alternative Energy Systems

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### 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)\* are properly designed, safely sited, installed and decommissioned at the end of their useful life.

### SECTION 9.02 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)\* up to a total height\* of 25 feet above roof peak.
  - 2. Small Tower Mounted Wind Energy Turbines (STWETs)\* 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 2 types of wind energy turbines in this class are:
  - 1. Small Grid Wind Energy Turbines (SGWETs)\* up to a total height of 150 feet.
  - 2. Large Grid Wind Energy Turbines (LGWETs)\* up to a total height of 495 feet.

Both Electric Grid Class types may also provide power for the personal use of resident consumers.

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### SECTION 9.03 TEMPORARY ANEMOMETER USE

Temporary use of an anemometer\* for measuring wind velocity to determine the feasibility of WET\* usage on a particular parcel\* 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\* requirements of this chapter that apply to the specific type of WET proposed for construction on the site as follows:
  1. Sections 9.04 and 9.06 through 9.08 for Personal Use Class WETs.
  2. Sections 9.04 and 9.09 through 9.15 for Electric Grid Class WETs.
- C. Anemometer usage is permitted for not more than 12 months for a SMWET\*, no more than 2 years for a STWET\*, and no more than 5 years for a SGWET\* or LGWET\*.

### SECTION 9.04 REQUIREMENTS APPLICABLE TO ALL WIND ENERGY TURBINES

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

- A. Signal Interference - All WETs must not interfere with communication systems such as, but not limited to, radio, telephone, television, satellite or emergency communication systems.
- B. WET Siting and Design Requirements:
  1. Visual Appearance:
    - a. A WET, including accessory buildings\*, 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.

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2. Vibrations produced by a WET must not be humanly perceptible beyond the parcel\* of property on which the WET) is located.
3. The sound pressure level may not exceed 60 dBA measured at the closest property line. The sound level may be exceeded during short-term events such as utility outages and/or severe windstorms.
4. When guy wires are used to support Wind Energy Towers\* the base of the tower and all guy wires must be enclosed by an 8-foot high fence.

### C. Safety Requirements:

1. All WET\* 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\* 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 outdoor electrical controls, control wiring, grounding wires, power lines, and system components must be placed underground within the boundary of each parcel at a depth designed to accommodate the existing land use to the maximum extent practicable. Wires between the base of the tower and the wind generator are exempt from this requirement.
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\* 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.

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- D. Decommissioning\* - All WETs must be decommissioned at the end of their useful life as follows:
1. WET\* Owner(s)\* or Operator(s)\* 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\* 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 PUBLIC NOISE LEVEL INQUIRIES AND COMPLAINTS**

When an aggrieved property owner believes that a WET\* is not in compliance with noise requirements of this ordinance, the following procedure must be followed:

- A. Notify Tuscola Township Zoning Administrator in writing regarding concerns about the noise level.
- B. 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.
- C. If the test indicates that the noise level is within ordinance noise requirements, Tuscola Township will use the deposit to pay for the test.
- D. 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.

### **SECTION 9.06 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.

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- B. Personal Use Class systems must have a clearly visible warning sign regarding voltage placed at the base of the WET.
- C. No Personal Use Class WET may be connected to the electric grid before the energy company has granted approval for connection to their system.
- D. In addition to the requirements in “A” and “B” above, Structure-Mounted WETs\* are subject to the following:
  - 1. The total height\* of a SMWET\* 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 setback\*, public right-of-way\*, public easement\*, or overhead utility lines than its total height from the ground.
  - 3. The SMWET must not be affixed to the wall or side of a structure\*.
  - 4. No more than 1 SMWET per building\* may be installed on residences and accessory buildings on the parcel\* of land. An attached garage is an accessory building for mounting 1 SMWET.
- E. 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\*, 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\*, public easement\*, 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\* 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

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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 9.07 FAILURE TO DECOMMISSION PERSONAL USE CLASS WETS**

If the Personal Use Class WET\* Owner(s)\* or Operator(s)\* fails to complete decommissioning\* within the period described 9.04.D.1, 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.

### **SECTION 9.08 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, their marital status, address, and parcel\* number.
- B. The signature of the applicant(s) and the property owner(s) if other than the applicant.
- C. Applications for SMWETs\* must include the number and location(s) of the SMWETs.
- D. A site plan\* including a detailed drawing showing the proposed location of all components and ancillary equipment of the SMWET(s) or STWET\*, property lines, physical dimensions of the property, existing building(s)\*, setback lines\*, right-of-way\* lines, public easements\*, 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).

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### **SECTION 9.09 ELECTRIC GRID CLASS WET REQUIREMENTS**

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

- A. Small Grid Wind Energy Turbines (SGWETs)\* and Large Electric Grid Wind Energy Turbines (LGWETs)\* are permitted as conditional uses in the agricultural, commercial, and industrial zoning districts where the property parcel\* dimensions meet the requirements of this ordinance. A SGWET is also permitted as a conditional use in Condominium Developments\*, and in Industrial zoned districts for WETs\* approved after the effective date of this ordinance.

### **SECTION 9.10 ELECTRIC GRID WET SITING AND DESIGN REQUIREMENTS**

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

- A. The design of Electric Grid Class WETs must conform to all applicable industry standards.
- B. The Electric Grid Class WET owner(s)\* or operator(s)\* must conduct an analysis on potential shadow flicker\* at any occupied building\* with direct line-of-site to the SGWET or LGWET. The analysis 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 analysis must identify situations where shadow flicker may affect the occupants of the buildings more than 30 hours per year, and describe measures that will be taken to eliminate or mitigate the problem. shadow flicker must not exceed 30 hours per year.
- C. Electrical systems must conform to the requirements of Section 9.04.C of this chapter.
- D. In addition to the requirements listed in “A”, “B”, and “C” above, a SGWET is also subject to the following:
  - 1. A SGWET located on property zoned agricultural, commercial, or industrial that has an occupied building must be located in the rear yard\*. In a Condominium Development a SGWET must be located in the General Common element\*.
  - 2. The Total Height\* of a SGWET must not exceed 150 feet.
  - 3. The lowest extension of any blade or other exposed moving component of a SGWET must be at least 20 feet above the ground (at the highest point of the grade level within 50 feet of the base of the tower), and, in addition at least 20 feet above any outdoor surfaces intended for human occupation, such as balconies or roof gardens, located directly below the SGWET.

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4. No more than 1 SGWET\* is permitted for every 2 ½ acres of land included in the parcel\*.
  5. SGWET setback and separation requirements:
    - a. The setback from occupied buildings\*, public road right-of-ways\*, drain rights of way, and zoning property setback lines\* must be equal to the total height\* of the SGWET measured from the base.
    - b. Each SGWET must be setback from the nearest above-ground public telephone or electric power line a distance equal to the total height of the SGWET measured from the base of the WET\* to the utility line.
    - c. SGWET Tower separation must be based on industry standard and manufacturer recommendations.
- E. In addition to the requirements listed in 9.04 and in “A”, “B”, and “C” above in this Section, a LGWET\* 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 the nearest occupied building on the same parcel as the LGWET a minimum of 2 times its total height, or 1,000 feet as measured from the base of the tower, whichever is greater.
    - b. The setback from public road right-of-ways\*, drain rights-of-way, communication lines, electric power lines, and zoning property setback lines must be equal to 1.5 times the total height of the LGWET, or 400 feet, whichever is greater, measured from the base of the tower.
    - c. LGWETS located on parcels that border Township boundary lines must be setback at distance of 2 times the total height of tower.
    - d. 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. Private driveways must meet the requirements specified in Section 3.13 of this ordinance.



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### **SECTION 9.11 ELECTRIC GRID CLASS WET SAFETY REQUIREMENTS**

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

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

### **SECTION 9.12 DECOMMISSIONING OF ELECTRIC GRID WETs**

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

- A. All access driveways to decommissioned Electric Grid WETs shall be removed, cleared, and graded by the WET\* 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\*.
- 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 Electric Grid Class WET Owner(s)\* or Operator(s)\* fails to complete decommissioning\* 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

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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 Electric Grid Class WET Owner(s) or Operator(s) must post and maintain Decommissioning Funds in a amount equal to Net Decommissioning Costs; 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 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\* 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\* 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 9.13 ELECTRIC GRID CLASS WET SITE PLAN REQUIREMENTS**

Site plan\* 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 Electric Grid WETs\*. 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

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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 an 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\*, right-of-ways\*, public and utility easements\*, public roads, access roads (including width) sidewalks, non-motorized pathways, large trees, and all buildings\*. 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 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. Additional details and information as required by the conditional use requirements of this Zoning ordinance\* as required by Section 10.03.
- B. The following site plan\* documentation must be included with the site plan:
1. The contact information for the owner(s)\* and operator(s)\* of the Electric Grid WET(s)\* as well as the contact information for all property owners on which the Electric Grid WET(s) is located.
  2. A copy of the lease, or recorded document, with the landowner(s) if the applicant does not own the land for the proposed Electric Grid WET(s). A Statement from the landowner(s) of the leased site that he/she will abide by all applicable terms and conditions of the conditional use permit, if approved.
  3. Identification and location, including parcel numbers, of the properties on which the proposed Electric Grid Class WET(s) will be located.
  4. In the case of a Condominium Development\*, a copy of the Condominium Development's Master Deed\* and/or Bylaws addressing the legal arrangements for the Electric Grid Class WET(s).
  5. The proposed number, representative types and total height\* of each Electric Grid Class WET to be constructed; including their manufacturer and model, product

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specifications including maximum noise output (measured in decibels\*), total rated capacity, rotor diameter\*, and a description of ancillary facilities.

6. Documents must be submitted by the developer/manufacturer confirming specifications for the Electric Grid WET(s) tower separation.
7. Documented compliance with the noise and shadow flicker\* requirements of this ordinance.
8. Engineering data concerning construction of the Electric Grid WET(s) and its base foundation, which may include, but not be limited to, soil boring data.
9. A certified registered engineer must certify that the Electric Grid WET(s) meets or exceeds the manufacturer's construction and installation standards.
10. Anticipated construction schedule.
11. 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 Electric Grid Class WET(s) to conduct maintenance, if applicable.
12. Documented compliance with Township, County, State, and Federal regulations including, but not limited to, all applicable safety, construction, environmental, electrical, and communications. The 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\* overlay zoning regulations.
13. Proof of liability insurance covering the WET(s)\*.
14. 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.
15. Other relevant information as may be requested by Tuscola Township to ensure compliance with the requirements of this ordinance.
16. Following the completion of construction, the applicant must certify that all construction is completed pursuant to the conditional use permit and approved site plan\*.
17. A written description of the anticipated life of each Electric Grid class WET; the estimated cost of decommissioning\*; the method of ensuring that funds will be

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available for decommissioning and site restoration; and removal and restoration procedures and schedules will be employed if the Electric Grid Class WET(s) become inoperable or non-functional.

18. The applicant will submit a decommissioning plan that will be carried out at the end of the Electric Grid Class WET(s) useful life, and any agreement with the landowner(s) that regarding equipment removal upon termination of the lease.
19. 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.
20. A completed application for an Electric Class WET(s) zoning permit.
21. In addition to the Site Plan Requirements of Section 10.03 of this ordinance, the LGWET(s)\* 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\* 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)\*.
  - 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, and/or other wildlife, wetlands, and fragile ecosystems. The study must conform to County, State, and federal wildlife agency recommendations based on local conditions.

### SECTION 9.14 CERTIFICATION AND COMPLIANCE

- A. Tuscola Township must be notified of a change in ownership of a Electric Grid Class WET or change in the ownership of the property on which the WET\* is located.
- B. The township reserves the right to inspect any and all 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\* of the WET. In addition to the above Certification and Compliance requirements, Electric Grid Class WETs will be subject to the following:

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1. A sound pressure level analysis shall be conducted from a reasonable number of sampled locations at the perimeter and interior of the property containing any Electric Grid Class WETs to demonstrate compliance with the requirements of this ordinance. Proof of compliance with the noise standards is required within 90 days of the date the Electric Grid Class WET becomes operational. Sound shall be measured by a third-party, qualified professional.
2. The Electric Grid Class WET owner(s) and operator(s) must provide the Township Clerk with a copy of the yearly maintenance inspection.

### **SECTION 9.15 ELECTRIC GRID CLASS WET INQUIRIES AND COMPLAINTS**

- A. Aggrieved property owners that allege that a Electric Grid WET is not in compliance with the noise requirements must follow the procedure listed in Section 9.05 of this chapter.
- B. Aggrieved property owners that allege an Electric Grid Class WET is not in compliance with the shadow flicker\* requirements of this ordinance should:
  1. Notify Tuscola Township in writing regarding concerns about the amount of shadow flicker.
  2. If the complaint is deemed sufficient by the township to warrant an investigation, the township will request the owner(s)\* 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 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.

### **SECTION 9.16 SMALL SCALE SOLAR ENERGY SYSTEMS**

- A. Purpose

It is the purpose of this sub-section to promote the safe, effective, and efficient use of private or residential (non-commercial) solar energy systems to generate electricity. Further, it is the purpose of this sub-section to standardize and streamline the review and permitting process for solar energy systems.

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### B. Findings:

The Township recognizes that solar energy is an abundant, renewable, and nonpolluting energy resource of which some residents and utility companies would like to make use. Generation of electricity by these facilities will reduce dependence on non-renewable energy resources and decrease air and water pollution that results from the use of conventional fossil fuels. Solar energy systems will also enhance the reliability and power quality of the power grid, reduce peak power demands, and help diversify the Township's energy supply.

### C. Definitions

1. A "solar energy system," in the context of this Ordinance, means the solar panels and associated technology needed to harness the sun's energy and make it usable.
2. A "solar panel" is a flat panel that uses arrays of photovoltaic cells to convert sunlight into electricity.
3. A "Small Scale" solar energy system is one that produces less than 1 megawatt of electricity per day.

### D. Solar Energy Systems – On-Site Use

1. Roof-Mounted Solar Energy Systems: Roof- and building-mounted solar energy systems for residential use are permitted accessory structures in all zoning districts, subject to the following regulations:
  - a. Height: Roof-mounted systems shall not extend more than four (4) feet above the roofline, as measured from the area of the roof where the panel is mounted. Solar energy systems shall not protrude beyond the edge of the roof.
  - b. Building Permit: Roof- and building-mounted systems shall require the property owner to obtain all permits required by statute from the US Federal Government, State of Michigan, Tuscola County, and Tuscola Township. The Owner must also comply with all standards of the State of Michigan adopted codes. The addition of solar panels to an existing system will require additional permits.
  - c. Area: Roof- and building-mounted systems shall not be subject to maximum lot coverage standards.
2. Ground-Mounted Solar Energy Systems

Ground-mounted and freestanding solar energy systems are permitted accessory structures in all zoning districts, subject to the following regulations:

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- a. Location and Setbacks - Where feasible, in all zoning district classifications except Medium Density Residential and Mixed Development, ground-mounted solar energy systems shall be located in the rear or the side-yard of the dwelling unit. In Medium Density Residential and Mixed Development districts, ground-mounted solar energy systems shall be located only in the rear yard. Solar energy systems shall also meet the minimum setbacks of the zoning district in which they are located.
  - b. Height - In all zoning district classifications except Medium Density Residential and Mixed Development, the height of the solar energy system and any mounts shall not exceed fifteen (15) feet when oriented at maximum tilt, measured from the natural grading of the property. In Medium Density Residential and Mixed Development zoning district classifications, the height of the solar energy system and any mounts shall not exceed ten (10) feet, measured from the natural grading of the property.
  - c. Building Permit - Ground-mounted systems shall require the property owner to obtain all permits required by statute from the US Federal Government, State of Michigan, Tuscola County, and Tuscola Township. The Owner must also comply with all standards of the State of Michigan adopted codes. The addition of solar panels to an existing system will require additional permits.
  - d. Area - Ground-mounted solar energy systems shall be subject to the maximum lot coverage standards of the zoning district, but in no case shall exceed one percent (1%) of the lot area up to one thousand five hundred (1,500) square-feet of solar panels. Such structures shall be subject to the applicable limitations for accessory buildings.
3. Glare and reflection
- a. Glare- and reflection-limiting solar panels shall be used where possible. Further, solar energy systems shall be located or placed so that concentrated solar glare shall not be directed toward or onto nearby properties or roadways at any time of the day.
  - b. Where it is not feasible for a property owner to direct glare or reflection away from neighboring properties or the roadway, the owner shall erect landscaping or other zoning-compliant barriers to minimize glare or reflection onto neighboring properties or roadways.
4. Batteries - When solar storage batteries exceeding one (1) kWh per hour are included as part of the solar collector system, they must be placed in a secure container or enclosure when in use subject to Fire Chief approval, and when no longer used shall be disposed of in accordance with applicable laws and regulations.



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5. Removal - If a solar energy system ceases to perform its intended function (generating electricity) for more than twelve (12) consecutive months, the property owner shall remove the collectors, mounts, and associated equipment and facilities no later than ninety (90) days after the end of the twelve (12) month period. Where the removal has not been lawfully completed as required above, and after at least thirty (30) days written notice, the Township may remove or secure the removal of the solar energy system or portion thereof, with the Township's actual cost and reasonable administrative charges to be placed as a lien on the property.

*Section 9.16 Text Amended per Ordinance 2023-2*

### **SECTION 9.17 LARGE-SCALE COMMERCIAL SOLAR ENERGY SYSTEMS**

#### A. Purpose

To provide land development, installation and construction regulations for photovoltaic Large-Scale Commercial Solar Energy Systems (SES) subject to reasonable conditions that will protect the public health, safety and welfare. These regulations establish minimum requirements and standards for the placement, construction, modification, and decommissioning of Large-Scale SES/Solar Farm facilities.

This section is intended to:

1. Protect Township areas from any potentially adverse effects, such as visual or noise impacts, of Solar Energy Systems and related structures or devices so that the public health, safety, and welfare will not be jeopardized.
2. Provide for the removal of abandoned or noncompliant Large-Scale SES/Solar Farm facilities, and related structure or devices.
3. Allow as a Conditional Use Large-Scale SES/Solar Farm facilities and related structures or devices in the Township districts zoned for Agricultural, Residential Agricultural, and Industrial use.
4. Prohibit Large-Scale SES/Solar Farm facilities where not expressly permitted.
5. Require an Escrow Account to reimburse the Township for costs connected to processing an application for a Conditional Use Permit and Site Plan.
6. Require the Applicant to execute a Development Agreement with the Township Board of Trustees after the Site Plan and Large-Scale SES Conditional Use Permit is approved by the Planning Commission, but before construction of the Large-Scale SES begins.

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### B. Definitions

The following terms and phrases shall have the meanings set forth below:

**AC Power (Alternating Current):** An electrical current whose magnitude and direction varies. It is considered the "standard" electrical power.

**Attached System:** A solar system in which solar panels are mounted directly on the building, typically the roof.

**DC Power (Direct Current):** An electrical current whose magnitude and direction stay constant. The photovoltaic cells on solar panels capture energy from sunlight in the form of DC and must be converted to AC by an inverter.

**Detached Systems:** Also known as a Ground Mounted Systems or Freestanding, shall mean any solar energy system that is directly installed in the ground and is not attached or affixed to an existing structure.

**Gigawatt:** A unit of power equal to one billion watts.

**Grid:** The infrastructure of power lines, transformers and substations that delivers electric power to buildings. The utility grid is owned and managed by electric utility companies.

**Installer:** A contractor that installs solar systems.

**Interconnection:** A link between utility company power distribution and local power generation that enables power to move in either direction.

**Inverter:** A device that converts DC power captured by the photovoltaic cells on solar panels into AC power.

**Kilowatt:** A unit of power equal to one thousand watts.

**Megawatt:** A unit of power equal to one million watts.

**On/Off Grid System:** A solar energy system that is interconnected with the utility grid is an on-grid or grid-tied system, while a system not interconnected is an off-grid system.

**Permitting:** The process by which a local unit of government allows for certain development, changes, and activities in their jurisdiction.

**Person.** Person means an individual, corporation, limited liability company, partnership, limited partnership, limited liability partnership, limited liability limited partnership, trust, or other legal entity.

**Photovoltaic (PV):** A method of generating electrical power by converting solar radiation (sunlight) into direct current electricity using semiconductors.

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**Photovoltaic System:** Photovoltaic (PV) Systems shall mean a solar energy system that produces electricity by the use of semiconductor devices, called photovoltaic cells that generate electricity whenever light strikes them to convert solar energy suitable for connection to utilization load.

**Professional Engineer (licensed):** A Licensed Professional Engineer as used in this Section is an engineer licensed in the State of Michigan under Public Act 299 of 1980, MCL 339.2001 *et seq.*

**Solar Energy Systems (SES):** Any equipment necessary to the process by which solar radiation is collected, converted into another form of energy, stored, protected from unnecessary dissipation and distributed. Solar energy systems consist primarily of solar thermal, photovoltaic and concentrated solar but may include other various experimental solar technologies. These devices may be either freestanding or attached to a structure and are sized to meet the various user needs and/or utility requirements.

**Large-Scale SES:** Also known as *Solar Farms*, means any SES facility and accessory structures or use that is designed and built to exclusively provide electricity to the electric utility's power grid and is not accessory to any other use. The Large-Scale SES is a principal use of property and may occupy the same property as another principal use, subject to a Conditional Use Permit.

Large-Scale SES/Solar Farms do not include small scale solar panels or technologies installed at individual residential or Large-Scale locations (e.g. roof or ground mounted panels) that generate less than 1 MW of electricity per day, as defined in Tuscola Township Zoning Ordinance Section 9.16.

**Time-of-Use (TOU) Rates:** A utility billing system in which the price of electricity depends upon the hour of day at which it is used. Rates are higher during the afternoon when electric demand is at its peak. Rates are lower during the night when electric demand is off peak.

### C. General Standards

The following standards shall apply to all Large-Scale SES/Solar Farms unless otherwise specifically noted:

1. Large-Scale SES/Solar Farms - Large-Scale SES/Solar Farms are only permitted in Township districts zoned as Agricultural, Residential Agricultural, and Industrial, subject to a Conditional Use Permit.
2. Design Safety Certification - The safety of the design of all Large-Scale SES shall be certified by a Michigan-licensed Professional Engineer acceptable to the Township. The standard for certification shall be included with the application for development.
3. Electrical and Building Codes - All electrical compartments, storage facilities, wire conduit, interconnections with utility companies and interconnections with private structures will conform to national and local electrical codes. All SES shall comply with local building permit requirements.

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4. Compliance with Township Ordinances - Large-Scale SES shall be in compliance with all Township Ordinance requirements and other applicable ordinances, rules and regulations.
5. Site Plan - In addition to those requirements of Chapter 10 of the Township Zoning Ordinance and the Site Plan Review Application, all applications for a Conditional Use Permit for a Large-Scale SES/Solar Farm shall be subject to Conditional Use standards in Agricultural, Residential Agricultural, and Industrial Districts, except as noted in this section. All applications must also include the following:
  - a. Equipment and unit renderings;
  - b. Setbacks from property lines and adjacent structures, and height of proposed structures;
  - c. Notarized written permission from the property owner authorizing the Solar Energy System;
  - d. All additional plans and requirements set forth in this Section and by the Planning Commission.
6. Height Restrictions - All photovoltaic panels located in a Large-Scale SES/Solar Farm shall be restricted to a maximum height of eighteen (18) feet, measured from the natural grade below the unit to the highest point of the unit at full tilt.
7. Setbacks - All photovoltaic solar panels and support structures associated with such Large-Scale SES/Solar Farms (excluding perimeter security fencing and landscaping described in sub-sections 9 and 16 below) shall be a minimum of one-hundred (100) feet from adjacent non-participating property lines, and a minimum of sixty (60) feet from any road right-of-way. The Planning Commission may impose larger setback requirements that are reasonable to protect adjacent residential uses.
8. Maximum Lot Coverage - Maximum lot coverage restrictions shall not apply to Large-Scale SES/Solar Farm facilities.
9. Safety Fencing/Property Access - A six (6) foot high security fence (construction materials to be established through the Conditional Use Permit process) shall be placed around the perimeter of the Large-Scale SES/Solar Farm. In addition to requirements of the Conditional Use Permit, any fence installed shall be wildlife-friendly such that wildlife is permitted to traverse over or through the fenced area. Photovoltaic solar panels, solar power plants, and electrical equipment shall be locked behind secure fencing. Knox boxes and keys shall be provided at locked entrances for emergency personnel access. Electric fencing and/or barbed wire fencing are not permitted.
10. Sound / Noise Level - The sound - noise generated from a Large-Scale SES shall not exceed fifty (50) dB(A), as measured from both the exterior of any habitable structures and also the closest property line to the SES. This sound pressure level may be exceeded during short-term events such as utility shortages or severe wind storms. If the ambient sound pressure level exceeds fifty (50) dB(A), the standard shall be the ambient dB(A) plus five (5) dB(A).

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11. Glare and Reflection - SES facilities shall be located or placed so that concentrated solar glare shall not be directed toward or onto nearby properties or roadways at any time of the day, nor shall they be located such that sunlight or glare is reflected into neighboring dwellings or onto adjacent roadways or private roads.
12. Installation Certification - A Michigan-licensed Professional Engineer shall certify that the construction and installation of the Large-Scale SES/Solar Farm project meets or exceeds the manufacturer's construction and installation standards.
13. Fire Risk - Large-Scale SES/Solar Farm facilities must adhere to all applicable electrical codes and standards. The owner or operator shall remove fuel sources, such as vegetation, from the immediate vicinity of electrical equipment and connections. Compliance with this sub-section shall be confirmed by the Fire Chief upon review of the site plan.
14. Waste - All solid wastes, whether generated from supplies, equipment parts, packaging, operation or maintenance of the Large-Scale SES/Solar Farm facilities shall be removed from the site and disposed of in an appropriate manner. All hazardous waste generated at any time shall be removed from the site immediately and disposed of in a manner consistent with all local, state, and federal rules and regulations.
15. Liability Insurance - The owner or operator of the Large-Scale SES/Solar Farm shall maintain a current insurance policy with a bond rating acceptable to the Township to cover installation and operation. The amount of the policy shall be established as a condition of Conditional Use Permit approval. A certificate of insurance shall be provided by the owner or operator to the Township.
16. Landscaping
  - a. All Large-Scale SES/Solar Farm facilities shall have a minimum landscape buffer of twenty (20) feet located around the perimeter of the project. If a proposed Large-Scale SES/Solar Farm facility is planned to be located across several parcels, then the location of the landscape buffer shall not be placed closer than sixty (60) feet from the shared boundary of adjacent non-participating property lines, and no closer than forty (40) feet from the edge of road right of ways. Upon review, the Planning Commission may waive this requirement for Large-Scale SES/Solar Farm facilities located in the Industrial district.
  - b. The perimeter of Large-Scale SES/Solar Farm facilities shall be screened and buffered by installed evergreen or native vegetative plantings whenever existing natural vegetation does not otherwise reasonably obscure the Large-Scale SES/Solar Farm facilities from any public street and/or adjacent, residential structures, subject to the following requirements:
    - i. The Large-Scale SES/Solar Farm facilities shall be subject to the requirements of this Ordinance and exempt from the landscape requirements as provided elsewhere in the Township Zoning Ordinance. Landscaping and Buffering are subject to the requirements of this section.

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- ii. The evergreen or native vegetative buffer shall be composed of native or evergreen trees that at planting shall be minimum of four (4) feet in height and shrubs two (2) feet in height. The evergreen trees shall be spaced no more than fifteen (15) feet apart on center (from the central trunk of one plant to the central trunk of the next plant), native trees shall be placed no more than thirty (30) feet apart on center and shrubs shall be spaced no more than seven (7) feet apart on center. All unhealthy (sixty (60) percent dead or greater) and dead material shall be replaced by the applicant, owner, or operator within one (1) year, or the next appropriate planting period, whichever occurs first.
  - iii. Until the trees described in subsection (b) above reach a height of six (6) feet or more, the Large-Scale SES/Solar Farm facility shall be required to install a six (6) foot privacy fence on all property lines adjacent to public roadways, and all property lines adjacent to non-participating residential properties. The Planning Commission may modify or waive this requirement for good cause.
  - iv. All plant materials shall be installed between March 15 and November 15. If the applicant requests a final certificate of occupancy from the Township and the applicant is unable to plant during the installation period, the applicant will provide the Township with a letter of credit, surety or corporate guarantee for an amount equal to one and one-half (1.5) times the cost of any planting deficiencies that the Township shall hold until the next planting season. After all plantings have occurred, the Township shall return the financial guarantee.
  - v. Failure to install or continuously maintain the required vegetative buffer or privacy fence shall constitute a violation of this Ordinance and any Conditional Use Permit may be subject to revocation.
17. Local, State and Federal Permits - Large-Scale SES/Solar Farm facilities shall be required to obtain all necessary permits from the U.S. Government, State of Michigan, Tuscola County, and Tuscola Township, and comply with standards of the State of Michigan adopted codes.
18. Electrical Interconnections - All electrical interconnection or distribution lines shall comply with all applicable codes and standard Large-Scale utility requirements. Use of above ground transmission lines shall be limited to the maximum extent feasible and subject to all applicable zoning requirements.
19. Signage - No advertising or non-project related graphics shall be on any part of the solar arrays or other components of the Large-Scale SES/Solar Farm facilities. This exclusion does not apply to entrance gate signage or notifications containing points of contact or any and all other information that may be required by authorities having jurisdiction for electrical operations and the safety and welfare of the public.

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### D. Abandonment and Decommissioning

Large-Scale SES/Solar Farm facilities considered under this Section must contain a Decommissioning Plan acceptable to the Planning Commission to ensure that structures and appurtenances are properly decommissioned upon the end of their operational life, inoperability, or abandonment.

#### 1. General Requirements of Decommissioning Plan

- a. A Decommissioning Plan with an attached site plan shall be submitted to the Planning Commission for review and approval prior to construction. The Plan shall detail the expected duration of the project, how the improvements will be decommissioned, a Michigan-licensed Professional Engineer's estimated cost of decommissioning, the financial resources to be used to accomplish decommissioning, and the surety bond holder with which the financial resources shall be deposited. The submitted plan must comply with all requirements of this Ordinance.
- b. The estimated costs of decommissioning for the purposes of financial security shall include actual labor and materials, including attorney and professional service fees, permit fees, and other fees necessary for decommissioning ("Actual Costs") and shall not use or incorporate the salvage value or other potential cost savings.
- c. The Applicant shall provide proof of financial security covering the actual costs of the Decommission Plan to the Planning Commission. Every three (3) years after Conditional Use Permit approval and Site Plan approval, whichever is later, the Applicant shall provide an updated estimate of the Actual Costs of the Decommissioning Plan to the Township, subject to the approval of the Planning Commission. The Applicant shall provide the Township proof of financial security covering the Actual Costs of the Decommission Plan to the Planning Commission. Failure to provide an updated actual cost estimate acceptable to the Planning Commission for the Decommissioning Plan shall be considered a violation of this Ordinance subject to enforcement as provided by law, and may result in revocation of the Conditional Use Permit.

#### 2. Abandonment

- a. Any Large-Scale SES/Solar Farm facility or any portion thereof, including but not limited to panels or accessory structures, that is not operated or found to be inoperable due to disrepair for a continuous period of twelve (12) months shall be considered abandoned.
  - i. Any non-operability as a result of State regulatory compliance orders, Township obtained injunctions, or other court orders shall not be included in the time calculation of abandonment.
- b. If it is found that a Large-Scale SES/Solar Farm or any portion thereof is abandoned, the Planning Commission, upon notice by the Tuscola Township Zoning Administrator, shall provide written notice to the applicant/owner/operator

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of a hearing before the Planning Commission to hear evidence that the Large-Scale SES/Solar Farm or abandoned portions thereof should not be decommissioned.

- c. Within ninety (90) days of the hearing where the Planning Commission has determined that a Large-Scale SES/Solar Farm is abandoned or inoperable and should be decommissioned, the owner/operator shall either repair the structure or obtain a demolition permit to remove the Large-Scale SES/Solar Farm or portion thereof which was set for decommissioning.
  - i. If a Large-Scale SES/Solar Farm is repaired within the timeframe above, a Michigan-licensed Professional Engineer (hired at the expense of the owner or operator) shall certify the Large-Scale SES/Solar Farm's safety and provide written notice to the Township of the same prior to the resumption of operation.
  - ii. Failure to repair and certify the structure or obtain a demolition permit within the 90-day period provided in this subsection shall be grounds for the Township to remove the Large-Scale SES/Solar Farm at the Owner's expense, drawing on the surety bond described in this subsection.

### 3. Process of Decommissioning and Restoration

- a. Decommissioning shall include removal of all equipment associated with the Large-Scale SES/Solar Farm, including all materials above and below ground up to four (4) feet in depth. The site shall be restored to a condition that reflects the specific character of the site including topography, vegetation, soils, drainage, and any other unique environmental features.
- b. The restoration shall also include: road repair and hazardous waste cleanup, if any, and all regrading, soil stabilization, and re-vegetation necessary to return the subject property to a stable condition consistent with conditions existing prior to the establishment of the Large-Scale SES/Solar Farm.
- c. The restoration process shall comply with all state, county, or local erosion control, soil stabilization and/or runoff requirements or ordinances and shall be completed within one (1) year.
- d. Extensions may be granted upon request to the Planning Commission prior to that expiration of the one (1) year requirement for completed decommissioning.

### 4. Financial Surety Bond

- a. The Decommissioning Plan shall include an agreement between the applicant and the Township that the financial resources for decommissioning shall be in the form of a surety bond with a replenishment obligation and shall be deposited by a bonding agent acceptable to Tuscola Township.



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- b. The financial resources for decommissioning shall be 125% of the estimated removal and restoration cost. The Planning Commission shall require independent verification of the adequacy of this amount from a Michigan-licensed Professional Engineer.
- c. The Planning Commission shall annually review the amounts deposited for removal, site restoration, and administration costs to ensure that they are adequate for these purposes. If the Planning Commission determines that these amounts are not adequate, the Township shall require the owner/operator to make additional deposits to increase the amount of the surety bond to cure such inadequacy.
- d. The Township shall have access to the surety bond funds for the expressed purpose of decommissioning. If decommissioning is not completed by the applicant within one (1) year of the end of project life, inoperability of the facility, or abandonment of the facility, the Township may draw on the funds to undertake and complete decommissioning. Surety bond funds may be used by the Township for administrative fees and costs associated with decommissioning, including engineering and legal fees.
- e. The Township and its agents are granted the right of entry onto the site, pursuant to reasonable notice, to effect or complete decommissioning.

### E. Violations

- 1. Municipal Civil Infraction - The Township is granted the right to file a municipal civil infraction for a violation of any provision of this Ordinance.
- 2. Compliance Order and Injunction
  - a. The Township is granted the right to obtain an order to compel compliance to the provisions of this Ordinance.
  - b. The Township may also seek injunctive relief to effect or complete decommissioning, and seek reimbursement from the applicant or the applicant's successor for decommissioning costs in excess of the surety bond set aside for those purposes. The Township also has the right to file a lien against any real estate owned by applicant or applicant's successor, or in which they have an interest, for the amount of the excess, and to take all steps allowed by law to enforce said lien.
  - c. The Township may take any other action as provided by law to enforce the provisions of this Ordinance.
- 3. Abandonment as Nuisance - An abandoned or inoperable Large-Scale SES/Solar Farm, as determined by the Planning Commission, is a nuisance per se. The Township may seek injunctive relief or other legal measures as provided by law against persons alleged to be in violation of this section, and such other relief as may be provided by law.

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- F. Inspection - The Township and its agents shall have the right, at any reasonable time, to provide same-day notice to the applicant to inspect the premises on which any Large-Scale SES/Solar Farm is located. The Township may hire one or more consultants, with approval from the applicant (which shall not be unreasonably withheld), to assist with inspections at the applicant, project owner, or project operator's expense. Inspections must be coordinated with, and escorted by, the applicant's operations staff at the Large-Scale SES/Solar Farm facilities to ensure compliance with the Occupational Safety and Health Administration (OSHA), NESC and all other applicable safety guidelines.
- G. Maintenance and Repair
1. Each Large-Scale SES/Solar Farm facility must be kept and maintained in good repair and condition at all times.
  2. Failure to Maintain
    - a. If the Township Zoning Administrator determines that a Large-Scale SES/Solar Farm facility fails to meet the requirements of this Ordinance and the Conditional Use Permit, or that it poses a safety hazard, the Zoning Administrator, or his or her designee, shall provide notice to the applicant of the safety hazard.
    - b. If, after a reasonable cure period (not to exceed seven (7) days), the safety hazards are not corrected, the applicant shall immediately shut down the Large-Scale SES/Solar Farm facility and not operate, start or restart the Large-Scale SES/Solar Farm facility until the issues have been resolved.
  3. Applicant shall keep a maintenance log on the solar farm and all equipment thereon, which shall be available for the Township's review within 48 hours of such request. Applicant shall keep all sites within the Large-Scale SES/Solar Farm facility neat, clean and free of refuse, waste, and unsightly, hazardous or unsanitary conditions.
  4. Violation of this section is a nuisance per se. The Township may seek injunctive relief or other legal measures as provided by law against persons alleged to be in violation of this section, and such other relief as may be provided by law.
- H. Roads - Any material damages or required improvements to a public road located within the Township resulting from the construction, maintenance or operation of a Large-Scale SES/Solar Farm facility shall be repaired at the applicant's or the Large-Scale SES/Solar Farm's expense. In addition, the applicant shall submit to the appropriate State or County agency a description of the routes to be used by construction and delivery vehicles; and road improvements that will be necessary to accommodate construction vehicles, equipment or other deliveries. The applicant shall abide by all State or County requirements regarding the use and/or repair of the roads.
- I. Additional Conditional Use Criteria
- The following topics shall be addressed in a Conditional Use application for Large-Scale SES/Solar Farm facilities in addition to those contained in Chapter 11 of the Township Zoning Ordinance.

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1. Project description and rationale - Identify the type, size, rated power output, performance, safety and noise characteristics of the system, including the name and address of the manufacturer, and model. Identify time frame, project life, development phases, likely markets for the generated energy, and possible future expansions.
  2. Job creation - Estimated construction jobs and estimated permanent jobs associated with the development.
  3. Visual impacts - Review and demonstrate the visual impact using photos or renditions of the project or similar projects, with consideration given to tree plantings and setback requirements.
  4. Wildlife - Review potential impact on wildlife on or near the site.
  5. Environmental analysis - Identify impact analysis on the water quality and water supply in the area, and dust from project activities.
  6. Waste - Identify solid waste or hazardous waste generated by the project or its infrastructure.
  7. Lighting - Provide lighting plans showing all lighting within the facility. No light may adversely affect or impact adjacent parcels. All lighting must be shielded from adjoining parcels and roadways, and light poles are restricted to eighteen (18) feet in height.
  8. Transportation plan - Provide access plan during construction and operation phases. Show proposed project service road ingress and egress access onto primary and secondary routes, layout of the plant service road system. Due to infrequent access to such facilities after construction is completed, it is not required to pave or curb solar panel access drives. It will be necessary to pave and curb driveway and parking lots used for occupied offices that are located on site.
  9. Public safety - Identify emergency and normal shutdown procedures. Identify potential hazards to adjacent properties, public roadways, and to the community in general that may be created.
  10. Sound limitations and review - Large-Scale SES/Solar Farm facilities shall not exceed 50 dB(A) at the property line closest to the solar energy system or the nearest habitable structure. If the ambient sound pressure level exceeds 50 dB(A), the standard shall be ambient dB(A) plus 5 dB(A).
  11. Telecommunications interference - Identify electromagnetic fields and communications interference generated by the project.
- J. Escrow Fee Account
1. An escrow account shall be deposited with the Township by the Applicant when the Applicant applies for a Conditional Use Permit for a Large-Scale SES. The monetary amount deposited by the Applicant in escrow with the Township shall be in the amount of \$10,000, to cover all reasonable costs and expenses associated with the site plan review,

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Conditional Use review, and approval process. Such escrow amount shall be in addition to any filing or application fees established by resolution.

- a. Permissible costs and expenses of the Township shall include, but are not limited to, reasonable fees of the Township Attorney, Township Planner, Township Engineer, and/or any other necessary contract professional or service, as well as costs for any reports or studies that are reasonably related to the zoning review process for the application.
2. At any point during the site plan or Conditional Use review process, the Township may require that the Applicant place additional funds into escrow with the Township if the existing escrow amount deposited by the Applicant is deemed insufficient by the Township.
3. If the escrow account needs replenishing and the Applicant refuses to do so within thirty (30) days, the site plan or Conditional Use process shall cease unless and until the Applicant makes the required additional escrow deposit.
4. The Applicant must also comply with any other applicable zoning escrow Resolutions or other Ordinances adopted by the Township.
5. The Township shall provide a summary of all account activity to the Applicant within a timely manner upon request. Any funds remaining within the escrow after approval of Conditional Use shall be returned in a timely manner to the Applicant.

### K. Development Agreement

Approval of the Conditional Use Permit for a Large-Scale SES and approval of final Site Plan for a Large-Scale SES shall not be in effect until a Development Agreement is signed by the Township. The Applicant shall be required to execute a Development Agreement that is acceptable to the Tuscola Township Board of Trustees if the Large-Scale SES application is approved. The Development Agreement with the Township is intended to incorporate the terms and conditions of final Site Plan approval and to ensure proper completion of the plan, which may include, but is not limited to, the Township's oversight fees during construction. The Township shall record the same in the Office of the Register of Deeds for Tuscola County.

*Section 9.17 Text Amended per Ordinance 2023-3*