Ossineke Township
Ordinance No. 2 of 2024

An ordinance to amend the Ossineke Township Zoning Ordinance Article 2 (Construction of Language and Definitions) and Article 4 (District Regulations) to address tiny homes.

Ossineke Township, Alpena County, Michigan hereby ordains:

Section 1: Amendment of Section 2.0 (Construction of Language and Definitions).

Section 2.0 (Construction of Language and Definitions) is hereby amended to add or amend the following definitions:

Battery Energy Storage System Definitions:

A. BATTERY ENERGY STORAGE SYSTEM. One (1) or more devices, assembled together, capable of storing energy produced by solar energy facilities and/or wind energy facilities in order to supply electrical energy at a future time, not to include a stand-alone car battery or an electric motor vehicle.

B. PARTICIPATING LOT. One (1) or more lots under a signed lease or easement for development of a battery energy storage system associated with the applicant project.

C. NON-PARTICIPATING LOT. One (1) or more lots for which there is not a signed lease or easement for development of a battery energy storage system associated with the applicant project.

Solar Energy Definitions:

A. SOLAR ENERGY FACILITY (UTILITY SCALE): A facility designed to capture and utilize the energy of the sun to generate electrical power to meet utility-scale needs for primarily off-site use. A solar energy collection facility consists of solar collection devices used to collect solar rays and all associated ancillary and structural devices needed to support and convert/transmit the energy collected.

B. SOLAR ENERGY PANELS (ACCESSORY): Solar collection devices designed to capture and utilize the energy of the sun to generate electrical power for use on-site. A solar collection device is the actual material(s) used to collect solar rays and all associated ancillary and structural devices needed to support and convert/transmit the energy collected. These devices may be either freestanding or attached to a structure and are an accessory use on the property.

   1. BUILDING-INTEGRATED ACCESSORY SOLAR ENERGY PANELS. Accessory solar energy panels that are an integral part of a primary or accessory building or structure (rather than a separate mechanical device), replacing or substituting for an architectural or structural component of the building or structure. Building-integrated systems include, but are not limited to, photovoltaic or hot water solar energy systems that are contained within roofing materials, windows, skylights, and awnings.

2. GROUND-MOUNTED OR POLE-MOUNTED ACCESSORY SOLAR ENERGY PANELS. Accessory solar energy panels mounted on support posts, like a rack or pole, that are attached to or rest on the ground.

3. BUILDING-MOUNTED OR ROOF-MOUNTED ACCESSORY SOLAR ENERGY PANELS. A solar energy system mounted on racking that is attached to the wall of a building or structure or is attached to or ballasted on the roof of a building or structure.

C. DUAL USE. A solar energy system that employs one or more of the following land management and conservation practices throughout the project site:

1. POLLINATOR HABITAT. Solar sites designed to meet a score of seventy-six (76) or more on the Michigan Pollinator Habitat Planning Scorecard for Solar Sites.

2. CONSERVATION COVER. Solar sites designed in consultation with conservation organizations that focus on restoring native plants, grasses, and prairie with the aim of protecting specific species (e.g., bird habitat) or providing specific ecosystem services (e.g., carbon sequestration, soil health).

3. FORAGE. Solar sites that incorporate rotational livestock grazing and forage production as part of an overall vegetative maintenance plan.

4. AGRIVOLTAICS. Solar sites that combine raising crops for food, fiber, or fuel, and generating electricity within the project area to maximize land use.

D. MAXIMUM TILT. The maximum angle of a solar collection device (i.e., most vertical position) for capturing solar radiation as compared to the horizon line.

E. MINIMUM TILT. The minimal angle of a solar collection device (i.e., most horizontal position) for capturing solar radiation as compared to the horizon line.

F. NON-PARTICIPATING LOT(S). One (1) or more lots for which there is not a signed lease or easement for development of a solar energy facility associated with the applicant project.

G. PARTICIPATING LOT(S). One (1) or more lots under a signed lease or easement for development of a solar energy facility associated with the applicant project.

H. REPOWERING. Reconfiguring, renovating, or replacing a solar energy facility to maintain or increase the power rating of the solar energy facility within the existing project footprint.

I. WILDLIFE-FRIENDLY FENCING. A fencing system with openings that allow wildlife to traverse over or through a fenced area.

Wind Energy System Definitions:

A. WIND ENERGY FACILITY: A power generating facility consisting of one or more wind turbines under common ownership or operation control, and includes substations, cables/wires, and other

buildings accessory to such facility, whose primary purpose is to supply electricity to off-site customers.

B. WIND TURBINE. A tower, pylon, or other structure, including all accessory facilities, upon which any, all, or some combination of the following are mounted:

1. A wind vane, blade, or series of wind vanes or blades, or other devices mounted on a rotor for the purpose of converting wind into electrical or mechanical energy.

2. A shaft, gear, belt, or coupling device used to connect the rotor to a generator, alternator, or other electrical or mechanical energy-producing device.

3. A generator, alternator, or other device used to convert the energy created by the rotation of the rotor into electrical or mechanical energy.

C. WIND TURBINE, UTILITY-SCALE. A wind turbine designed and used primarily to generate electricity by or for sale to utility companies.

D. WIND TURBINE, ON-SITE. A wind turbine designed and used primarily to generate electricity or produce mechanical energy for use on the property where located.

E. WIND TURBINE HEIGHT. The distance between the ground and the highest point of the wind turbine, plus the length by which the rotor wind vanes or blades (in their highest position) mounted on a horizontal axis wind turbine rotor exceeds the height of the wind turbine.

F. AMBIENT. Ambient is defined as the sound pressure level exceeded ninety (90) percent of the time.

G. ANEMOMETER. A device used to measure wind speed.

H. DECIBEL. The unit of measure used to express the magnitude of sound pressure and sound intensity.

I. HORIZONTAL AXIS WIND TURBINE. A wind turbine in which the rotor(s) rotate around a horizontal shaft.

J. PARTICIPATING LOT. One (1) or more lots under a signed lease or easement for development of a wind energy facility associated with the applicant project.

K. NON-PARTICIPATING LOT. One (1) or more lots for which there is not a signed lease or easement for development of a wind energy facility associated with the applicant project.

L. SHADOW FLICKER. Alternating changes in light intensity caused by the moving blade of a wind turbine casting shadows on the ground and stationary objects, such as the window of a dwelling.

M. VERTICAL AXIS WIND TURBINE. A wind turbine in which the rotor rotates around a vertical shaft.

Section 2: Amendment of Section 4.0 (Table of Permitted Uses and Special Land Uses).

Section 4.0 (Table of Permitted Uses and Special Land Uses) is hereby amended as follows:

TABLE OF PERMITTED USES & SPECIAL LAND USES **P** = Permitted by right **S** = Permitted with a Special Use Permit *Uses with Supplemental Development Regulations (Article 7)	R-1	R-3	R-R	FF-1	B-1	B-2	I
UTILITIES/ENERGY							
*Battery Energy Storage Systems**				S			
*Solar Energy Facility (Utility Scale)**				~~P~~ S			
*Solar Energy Panels (Accessory)**	P	P	P	P	P	P	P
*Wind Energy Facilities and Anemometer Towers (Commercial)**				S			
*Wind Turbines, Accessory**				S			

Section 3: Amendment of Section 7.25 (Wind Energy Facilities).

Section 7.25 is hereby replaced with the following:

Wind energy facilities consisting of one (1) or more wind turbines whose main purpose is to supply electricity to off-site customers shall be allowed as a Special Land Use and shall adhere to the following requirements in addition to the standards contained in **Section 5.6** and **Section 6.3** of this Ordinance. Wind energy facilities may contain Battery Energy Storage Systems pursuant to **Section 7.28**.

A. **Principal or Accessory Use**.

A wind energy facility or anemometer tower may be considered either a principal or an accessory use. A different existing use or an existing structure on the same zoning lot shall not preclude the installation of a wind energy facility or a part of such facility on such lot. Wind energy facilities that are constructed and installed in accordance with the provisions of this Section shall not be deemed to constitute the expansion of a nonconforming use or structure.

B. **State or Federal Requirements**.

Any proposed wind turbine or anemometer tower shall meet or exceed any standards and regulations of the **Federal Aviation Administration** (FAA), **Michigan Aeronautics Commission** (MAC), the **Michigan Public Service Commission**, **National Electric Safety Code**, **Federal Energy Regulatory Commission**, and any other agency of the state or federal government with the authority to regulate wind turbines or other tall structures in effect at the time the Special Use approval is approved.

C. **Design & Installation.**

All wind turbines shall comply with the building code currently adopted by Ossineke Township. Building permits for all wind turbines must be issued to a licensed contractor and applications shall be accompanied by engineering drawings of the wind turbine structure including the tower, base, and footings. An engineering analysis of the tower showing compliance with the currently adopted building code and certified by a licensed professional engineer shall also be submitted.

D. **Minimum Site Area**.

The minimum site area for a wind energy facility or an anemometer tower shall be as necessary to meet required wind energy setbacks and any other standards of this Article.

E. **Setbacks**.

Each proposed wind turbine or anemometer tower shall meet the following applicable setback requirements:

1. **Non-Participating Property Lines**. Each wind turbine shall be set back from the nearest property line of a non-participating lot a minimum of 1.1 times its total height as measured from the base of the wind turbine.

2. **Occupied Building Setback on Non-Participating Lots**. Each wind turbine shall be set back from the nearest dwelling or occupied community building that is located on non-participating lot(s) a minimum of 2.1 times its total height as measured from the base of the wind turbine.

3. **Dwellings and Other Structures on Participating Lots**. Each wind turbine shall be set back from the nearest dwelling or other structure that is located on participating lot(s) a minimum of 1.1 times its total height as measured from the base of the wind turbine.

4. **Public Road Setbacks**. Each wind turbine shall be set back from the nearest public road a minimum distance of 1.5 times its total height determined at the nearest boundary of the underlying right-of-way for such public road.

5. **Overhead Communication and Electric Transmission Lines**. Each wind turbine shall be set back from overhead communication and electric transmission lines (not including utility service lines to individual houses or outbuildings) a minimum distance of 1.5 times its total height as measured from the base of the wind turbine.

F. **Height**.

Regarding wind turbine height, the applicant shall demonstrate compliance with the **Michigan Tall Structures Act** (P.A. 259 of 1959, as amended), **FAA** guidelines, and **Michigan Aeronautics Commission** guidelines as part of the approval process.

G. **Tower Separation**.

Turbine/tower separation shall be based on industry standards and manufacturer recommendation.

H. **Minimum Ground Clearance**.

The lowest point of the arc created by rotating wind vanes or blades on a wind turbine shall be no less than fifty (50) feet.

I. **Maximum Noise Levels**.

The wind energy facility does not generate a maximum sound in excess of forty-five (45) dBA (Leq (1 hour)) at the lot line of all adjacent nonparticipating property. The site plan shall include modeled sound isolines extending from the sound source to the dwelling. The applicant may be required to provide operating sound pressure level measurements from a reasonable number of sampled locations to demonstrate compliance with this standard.

J. **Maximum Vibrations**.

Any proposed wind turbine shall not produce vibrations through the ground humanly perceptible on non-participating lots.

K. **Potential Ice Throw**.

Wind turbines shall be installed with ice detection, de-icing technology, or a similar application to demonstrate ice throw can be mitigated.

L. **Signal Interference**.

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

M. **Visual Impact, Lighting, Power Lines**.

1. Wind turbines shall be mounted on tubular towers, painted a non-reflective, non-obtrusive neutral color. The appearance of turbines, towers, and buildings shall be maintained throughout the life of the wind energy facility pursuant to industry standards (i.e. condition of exterior paint, signs, landscaping). A certified registered engineer and an authorized factory representative shall certify that the construction and installation of the wind energy facility meets or exceeds the manufacturer's construction and installation standards.

2. The design of the wind energy facility's buildings and related structures shall, to the extent reasonably possible, use materials, colors, textures, screening, and landscaping that will blend facility components with the natural setting and the environment existing at the time of installation.

3. Wind turbines shall not be artificially lighted, except to the extent required by the **FAA** or the **MAC** or other applicable authority, or otherwise necessary for the reasonable safety and security thereof. If lighting is required, the lighting alternatives and design chosen shall meet the following standards:

    a. Radar-activated obstruction lighting system shall be utilized, if available and if permitted by the FAA.

    b. Lighting shall be the intensity required under state or federal regulations.

c. Lighting shall not be strobe lighting or other intermittent white lighting fixtures, unless expressly required by state or federal regulations. Such intermittent lighting shall be alternated with steady red lights at night if acceptable to state or federal regulations.

d. Lighting may be a red top light that does not pulsate or blink.

e. All tower lighting required by state or federal regulations shall be shielded to the extent possible to reduce glare and visibility from the ground.

f. Wind turbines shall not be used to display any advertising except the reasonable identification of the manufacturer or operator of the wind energy facility.

g. The electrical collection system shall be placed underground within the interior of each lot at a depth designed to accommodate the existing agricultural land to the maximum extent practicable. The collection system may be placed overhead adjacent to state and county roadways, near substations or points of interconnection to the electric grid or in other areas as necessary.

N. **Shadow Flicker**.

1. The wind turbine shall be designed in such a manner as to minimize shadow flicker on a roadway. The wind turbine shall be designed in such a manner as to prevent shadow flicker on any existing structures located on non-participating lots. If necessary to prevent shadow flicker from crossing occupied structures, the wind turbine may be programmed to stop rotating during times when the wind turbine shadow crosses these structures. The wind turbine operator may obtain written agreements which allow shadow flicker to cross an occupied structure.

2. The Planning Commission may require the applicant to conduct an analysis of potential shadow flicker at occupied structures if it deems such an analysis necessary. The analysis shall identify the locations of shadow flicker that may be caused by the project and the expected durations of the flicker at these locations from sunrise to sunset over the course of a year. The analysis shall identify problem areas where shadow flicker may affect the occupants of the structures and describe measures that shall be taken to eliminate or mitigate the problems.

O. **Safety**.

1. All collection system wiring shall comply with all applicable safety and stray voltage standards.

2. Wind turbine towers shall not be climbable on the exterior.

3. All access doors to wind turbine towers and electrical equipment shall be lockable.

4. Appropriate warning signs shall be placed on wind turbine towers, electrical equipment, and facility entrances.

5. All wind turbines shall be equipped with controls to control the rotational speed of the blades within design limits for the specific wind turbine.

6. **Hazard Planning**. An application for a wind turbine shall be accompanied by a hazard prevention plan. Such plan shall contain:

    a. Certification that the electrical wiring between turbines and between turbines and the utility right-of-way does not pose a fire hazard.

    b. Location of landscaping to be designed to avoid the spread of fire from any source on the turbine; such preventative measures may address the types and locations of vegetation below the turbine and on the site.

    c. A listing of any hazardous fluids that may be used on site shall be provided, including Material Data Safety Sheets (MDSS).

    d. Certification that the turbine has been designed to contain any hazardous fluids shall be provided.

    e. A statement certifying that the turbine shall be routinely inspected to ensure that no fluids are released from the turbine.

    f. Approved County Road Commission routes and bond surety for any perceivable road damage.

    g. The Township may require the owner or operator to provide emergency training and/or equipment to local emergency personnel to be able to provide the required level of emergency services safely. Wind Energy Facility shall be maintained in good working order and in accordance with industry standards. Site access shall be maintained, including snow removal at a level acceptable to the local fire department.

P. **Approvals**.

All required approvals from other local, regional, state, or federal agencies must be obtained prior to approval of a site plan. In the case where site plan approval is a requirement for other local, regional, state, or federal agency approval, evidence of such shall be submitted with the site plan.

Q. **Site Plan Required**. A Special Use application for a Utility-Scale Wind Energy System shall include a site plan pursuant to **Section 5.4.** The following items are required unless waived by the Planning Commission:

1. **Site Plan Drawing**. All applications for a Utility-Scale Wind Energy System shall be accompanied by a detailed site plan map that is drawn to scale and dimensioned, displaying the following information:

    a. Existing property features to include the following: lot lines, physical dimensions of the property, land use, zoning district, contours, setback lines, rights-of-way, 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 and utilities within three hundred (300) feet of the lot lines including dwellings within five hundred (500) feet of the lot lines (participating and non-participating lots).

b. Location and height of all proposed wind turbines, 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 Utility-Scale Wind Energy System.

c. Additional details and information as required by the Special Use requirements of the Zoning Ordinance or as requested by the Planning Commission.

2. **Site Plan Documentation**. The following documentation shall be included with the site plan:

a. The contact information for the Owner(s) and Operator(s) of the Utility-Scale Wind Energy System as well as contact information for all property owners on which the Utility-Scale Wind Energy System is located.

b. A copy of the lease, or recorded document, with the landowner(s) if the applicant does not own the land for the proposed Utility-Scale Wind Energy System. A statement from the landowner(s) of the leased site that he/she will abide by all applicable terms and conditions of the Special Use permit, if approved.

c. Identification and location of the properties on which the proposed Utility-Scale Wind Energy System will be located.

d. The proposed number, representative types, and height of each wind turbine to be constructed; including their manufacturer and model, product specifications including maximum noise output (measured in decibels), total rated capacity, rotor diameter, and a description of ancillary facilities.

e. Documents shall be submitted by the developer/manufacturer confirming specifications for wind turbine separation.

f. Documented compliance with the noise, and shadow flicker requirements set forth in this Ordinance.

g. Engineering data concerning construction of the Utility-Scale Wind Energy System and its base or foundation, which may include, but not be limited to, soil boring data.

h. A certified registered engineer shall certify that the Utility-Scale Wind Energy System meets or exceeds the manufacturer's construction and installation standards.

i. Anticipated construction schedule.

j. The location of any battery energy storage system on site.

k. 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 Utility-Scale Wind Energy System to conduct maintenance, if applicable.

l. Documented compliance with applicable local, state and national regulations including, but not limited to, all applicable safety, construction, environmental, electrical, and communications. The Utility-Scale Wind Energy System shall comply with **Federal Aviation Administration** (FAA) requirements, **Michigan Airport Zoning Act**, **Michigan Tall Structures Act**, and any applicable airport overlay zone regulations.

m. Proof of applicant's liability insurance.

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

o. Other relevant information as may be requested by the Township to ensure compliance with the requirements of this Ordinance.

p. Following the completion of construction, the applicant shall certify that all construction is completed pursuant to the Special Use Permit.

q. A written description of the anticipated life of each Utility-Scale Wind Energy System.

r. The Township reserves the right to review all maintenance plans and bonds under this Ordinance to ensure that all conditions of the permit are being followed.

s. Signature of Applicant.

t. In addition to the Site Plan Requirements listed previously, the Utility-Scale Wind Energy System shall be subject to the following:

(a) A site grading, erosion control, and storm water drainage plan will be submitted to the Zoning Administrator prior to issuing a Special Use permit for a Utility-Scale Wind Energy System. At the Township's discretion, these plans may be reviewed by the Township's engineering firm. 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 of any road improvements that will be necessary to accommodate construction vehicles, equipment or other deliveries, and an agreement or bond which guarantees the repair of damage to public roads and other areas caused by construction of the Utility-Scale Wind Energy System.

(c) A statement indicating what hazardous materials will be used and stored on the site.

(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 shall conform to state and federal wildlife agency recommendations based on local conditions.

(e) Property Value Analysis. An analysis by a third-party qualified professional that evaluates the impact on property value in the Township. The analysis shall take inflation into account.

R. **Decommissioning Plan Required**.

The applicant shall submit a decommissioning plan. The plan shall include:

1. The anticipated life of the project.

2. The anticipated manner in which the project will be decommissioned and the site restored, including a description of which above-grade and below-grade improvements will be removed, retained (e.g. access drive, fencing), or restored for viable reuse of the property consistent with the zoning district.

3. The estimated decommissioning costs in current dollars. Such costs shall not include credit for salvageable value of any materials.

4. The method of ensuring that funds will be available for decommissioning and restoration.

5. County Road Commission approved traffic route for decommissioning and surety bond to assure no perceived road damage is done.

6. The Planning Commission shall require the owner of the wind turbine to deposit a performance guarantee in an amount equal to 1.25 times the estimated costs associated with the removal of the wind turbine or anemometer tower and all associated equipment and accessory structures and restoration of the site to a reusable condition which shall include the removal of all underground structures to a depth of five (5) feet below the natural ground level at that location. The amount of the performance guarantee shall be reviewed every five (5) years. The amount of the performance guarantee shall be increased based on an inflation rate equal to the average of the previous ten (10) years Consumer Price Index. The performance guarantee shall be in the form of a cash deposit, certified check, irrevocable bank letter of credit, or surety bond acceptable to the Township.

   A facility owner may at any time:

   a. Proceed with the decommissioning plan approved by the Planning Commission and remove the system as indicated in the most recent approved plan; or

   b. Amend the decommissioning plan with Planning Commission approval and proceed according to the revised plan.

S. **Abandonment and Removal**.

1. If a wind turbine owner or operator intends to abandon and, in fact, does abandon a wind turbine by not operating it for a continuous period of twelve (12) months, said wind turbine shall be considered abandoned, and the owner of such wind turbine or anemometer tower shall remove the same within one hundred eighty (180) days of the receipt of a notice of abandonment by the Township. Failure to remove an abandoned wind turbine or anemometer tower within the one hundred eighty (180) day period provided in this subsection shall be grounds for the Township to

remove the wind turbine or anemometer tower at the owner's expense. The Planning Commission may grant an extension to this one hundred eighty (180) day period.

2. In addition to removing the wind turbine, or anemometer tower, the owner shall restore the site of the wind turbine or anemometer tower to its original condition prior to location of the wind turbine or anemometer tower, subject to reasonable wear and tear. Any foundation associated with a wind or anemometer tower shall be removed to a minimum depth of five (5) feet below the final grade and site vegetation shall be restored.

T. **Equipment Replacement and Repowering**.

Major components of the wind turbine may be replaced without a modification of the Special Use permit provided all regulations contained herein are adhered to. A wind energy facility may at any time be repowered, without the need to apply for a new Special Use permit, by reconfiguring, renovating, or replacing the wind energy components to increase the power rating within the existing project footprint. A proposal to change the project footprint of an existing wind energy facility or to add a greater number of wind turbines than were approved as part of the Special Use or to increase the height of the existing turbines shall be considered a new application, subject to the ordinance standards at the time of the request. Expenses for legal services and other studies resulting from an application to modify a wind energy facility will be reimbursed to the Township by the solar energy facility owner in compliance with established escrow policy.

Section 4: Amendment of Section 7.26 (Accessory Wind Turbines) – formerly Wireless Communications.

Section 7.26 is hereby replaced with the following (Wireless Communications is hereby renumbered to 7.27):

A. **Accessory Wind Turbines**.

A wind energy system which is intended to primarily serve the needs of the property upon which it is located shall be considered an accessory structure and shall be permitted by right. The following site development standards shall apply:

1. **Design & Installation.** All wind turbines (ground and roof-mounted) shall comply with the building code currently adopted by Ossineke Township. Building permits for all wind turbines must be issued to a licensed contractor and applications shall be accompanied by engineering drawings of the wind turbine structure including the tower, base, and footings. The installation of the wind turbine shall meet manufacturer's specifications.

2. **Plot Plan Submittal.** An application for the installation of a Small On-Site Wind Energy System shall include a plot plan including the following information:

    a. Location of the proposed wind turbine.

    b. Location of all structures on the property and adjacent properties and the distance from the wind turbine.

c. Location and approximate height of trees within fifty (50) feet of the wind turbine.

d. Distance from other wind turbines on adjacent lots, if applicable.

3. **Minimum Lot Size.**

   a. **Ground Mounted Horizontal Axis Wind Turbine.** A minimum lot width of one hundred fifty (150) feet and at least three-fourths (3/4) acre in area is required.

4. **Height.** The maximum height above ground for both the Horizontal and Vertical Axis Wind Turbines shall be determined on a case by case basis dependent upon the site and manufacturer's specifications and recommendations.

5. **Multiple Wind Energy Turbines.**

   a. **Ground Mounted**. No more than one on any lot of less than one (1) acre in size. For lots one (1) acre and over in area, the number of turbines shall be determined by the spacing requirement of the manufacturer and shall be approved by the Planning Commission.

   b. **Roof Mounted**. A maximum of two (2) may be installed on a building.

6. **Rotor Clearance.** A minimum fifteen (15) foot clearance from the ground shall be maintained for the vertical blade tip of a Horizontal Axis Wind Turbine and for the bottom of the rotating spire or helix of a Vertical Axis Wind Turbine.

7. **Guy Wires**. The use of guy wires shall be prohibited.

8. **Noise.** Small wind energy systems shall not cause a sound pressure level in excess of fifty-five (55) dB(A) or in excess of five (5) dBA above the background noise, whichever is greater, as measured at the nearest property line. This level may be exceeded during short-term events such as utility outages and severe wind storms.

9. **Vibration.** Small wind energy systems shall not cause vibrations through the ground which are perceptible beyond the property line of the parcel on which it is located.

10. **Setback**. The distance between an on-site wind turbine and the lot lines of adjacent lots shall be at least equal to the height of the tower including the top of the blade in its vertical position.

11. **Spacing**. Minimum spacing between wind energy systems (on- and off-site) shall be per the manufacturers specifications.

12. **Reception Interference.** Small wind energy systems shall not cause interference with television, microwave, navigational or radio reception to neighboring areas.

13. **Shadow Flicker.** The property owner of a wind turbine shall make reasonable efforts to minimize shadow flicker to any occupied building on nearby properties.

14. **Potential Ice Throw.** Any potential ice throw or ice shedding from the wind turbine shall not cross the property lines of the site nor impinge on any right-of-way or overhead utility line.

15. **Visual Impact.** All visible components of a small onsite wind energy system shall be painted a non-reflective, non-obtrusive neutral color and maintained in good repair in accordance with industry standards.

16. **Safety.** A small on-site wind energy system shall have an automatic braking system to prevent uncontrolled rotation.

17. **Other Regulations.** On-site use of wind energy systems shall comply with all applicable State construction and electrical codes, Federal Aviation Administration requirements, Michigan Aeronautics Commission requirements, the Michigan Tall Structures Act (P.A. 259 of 1959, as amended), and the Michigan Public Service Commission and Federal Energy Regulatory Commission standards.

Section 5: Amendment of Article 7 (Supplemental Regulations).

Section 7.28 (Battery Energy Storage Systems - BESS) is hereby added as follows:

A. **Purpose**.

The purpose of this Section is to provide for the development, installation, and construction of battery energy storage systems subject to reasonable conditions that will protect the character of the Township and the nearby property owners and ensure the health, safety, and welfare of Township residents.

B. **Scope**.

This Section applies to Battery Energy Storage Systems that are stand-alone facilities or are in conjunction with another use such as Solar Energy Facilities or Wind Energy Facilities. Battery Energy Storage Systems shall comply with this Section, the site plan review standards in **Section 5.6** (Site Plan Approval Standards) and the Special Use standards in **Section 6.3** (Special Land Use Approval Standards).

C. **Setbacks and Height**.

1. **Setbacks**. The setbacks of all buildings and components of Battery Energy Storage Systems shall be at least five hundred (500) feet from the road right-of-way and all lot lines of non-participating lots.

2. **Height**. The maximum height of a Battery Energy Storage System or building containing a Battery Energy Storage System shall not exceed the maximum building height in the district.

D. **Screening**.

(1) The Planning Commission may require that battery energy storage systems be screened year-round from view from any existing adjacent non-participating lot line and the public right-of-way by use of

a screening wall, evergreen vegetation, or other screening of similar effectiveness and quality, as determined by the Planning Commission. Screening shall look as natural as possible through the use of varying plant materials of varying heights, if possible. Natural vegetation may be counted toward screening requirements. Screening shall be maintained throughout the life of the facility including replacing dead vegetation within six (6) months or at the earliest feasible time of year dependent on the weather. The Planning Commission may reduce or waive screening requirements provided that any such adjustment is in keeping with the intent of the Ordinance.

(2) Areas within one hundred (100) feet on each side of a Battery Energy Storage System shall be cleared of combustible vegetation and other combustible growth (including stumps of trees).

E. **Lighting**.

Lighting of the Battery Energy Storage System shall be limited to that minimally required for safety and operational purposes and shall be reasonably shielded and downcast from abutting properties.

F. **Sound**.

The sound pressure level of a battery energy storage system and all ancillary equipment shall not exceed forty-five (45) dBA (Leq (1 hour)) at the lot line of each adjacent non-participating lot.. The site plan shall include modeled sound isolines extending from the sound source to the dwelling. The applicant may be required to provide operating sound pressure level measurements from a reasonable number of sampled locations to demonstrate compliance with this standard.

G. **Land Clearing**.

Land disturbance or clearing shall be limited to what is minimally necessary for the installation and operation of the system. Topsoil distributed during site preparation (grading) on the property shall be retained on site.

H. **Access Drives**.

New access drives within the Battery Energy Storage Systems shall be designed to minimize the extent of soil disturbance, water runoff, and soil compaction on the premises. The use of geotextile fabrics and gravel placed on the surface of the existing soil for temporary roadways during the construction of the Battery Energy Storage System is permitted, provided that the geotextile fabrics and gravel are removed from those temporary roadways once the Battery Energy Storage System is in operation. Access drives shall be removed upon decommissioning unless the property owner requests the access drives remain in place or the Planning Commission makes a determination that the access drives should remain in place.

I. **Fencing**.

Battery Energy Storage Systems may be secured with perimeter fencing to restrict unauthorized access. Fencing is not subject to setbacks. The Planning Commission may require wildlife-friendly fencing.

J. **Safety and Compliance**.

1. Construction of a Battery Energy Storage System shall comply with the National Electric Safety Code and the Building Code. In the event of a conflict between the County Building Code and National Electric Safety Code (NESC), the NESC shall prevail.

2. **System Certification**. All Battery Energy Storage Systems shall be in compliance with the latest edition of NFPA 855 Standard for the Installation of Stationary Energy Storage Systems at the time of application. Compliance includes that all system components and equipment shall be listed by a Nationally Recognized Testing Laboratory to UL 9540 (Standard for Energy Storage Systems and Equipment) and that Battery Energy Storage Systems are subject to UL 9540A (Test Method for Evaluating Thermal Runaway Fire Propagation in Battery Energy Storage Systems), as applicable. Battery Energy Storage Systems, components, and associated ancillary equipment shall have required working space clearances, and electrical circuitry shall be within weatherproof enclosures marked with the environmental rating suitable for the type of exposure in compliance with NFPA 70. ~~Battery energy storage systems and equipment shall be listed by a Nationally Recognized Testing Laboratory to UL 9540 (Standard for Battery Energy Storage Systems and Equipment) or approved equivalent, with subcomponents meeting each of the following standards as applicable~~:

   ~~a. UL 1973 (Standard for Batteries for Use in Stationary, Vehicle Auxiliary Power and Light Electric Rail Applications),~~

   ~~b. UL 1642 (Standard for Lithium Batteries),~~

   ~~c. UL 1741 or UL 62109 (Inverters and Power Converters),~~

   ~~d. Certified under the applicable electrical, building, and fire prevention codes as required.~~

   e. ~~Alternatively, field evaluation by an approved testing laboratory for compliance with UL 9540 (or approved equivalent) and applicable codes, regulations, and safety standards may be used to meet system certification requirements.~~

3. **Site Access**. Battery energy storage systems shall be maintained in good working order and in accordance with industry standards. Site access shall be maintained, including snow removal at a level acceptable to the local fire department.

4. Battery Energy Storage Systems, components, and associated ancillary equipment shall have required working space clearances, and electrical circuitry shall be within weatherproof enclosures marked with the environmental rating suitable for the type of exposure in compliance with NFPA 70.

K. **Increased Storage Capacity**.

1. The components of the Battery Energy Storage System may be reconfigured, renovated, or replaced to increase the power storage capacity within the existing project footprint.

2. A proposal to change the project footprint of an existing Battery Energy Storage System shall be considered a new application, subject to the ordinance standards at the time of the request. Expenses for legal services and other studies resulting from an application to modify a Battery

Energy Storage System will be reimbursed to the Township by the Battery Energy Storage System owner in compliance with established escrow policy.

L. **Emergencies**.

The Township may require the owner or operator to provide emergency training and/or equipment to local emergency personnel to be able to provide the required level of emergency services safely. Battery Energy Storage Systems shall be maintained in good working order and in accordance with industry standards. Site access shall be maintained, including snow removal at a level acceptable to the local fire department.

M. **Application Requirements and Performance Guarantee**.

1. **Site Plan**. A site plan pursuant to **Section 5.4** shall be required. The site plan shall include the following:

    a. All lot lines and dimensions, including a legal description of each lot comprising the Battery Energy Storage System.

    b. Names of owners of each lot within the Township that is proposed to be within the Battery Energy Storage System.

    c. Vicinity map showing the location of all surrounding land uses.

    d. Location of all proposed battery structures, buildings that house batteries, other buildings or structures, electrical tie lines and transmission lines, security fencing, and all above-ground structures and utilities associated with a Battery Energy Storage System.

    e. Horizontal and vertical (elevation) to-scale drawings with dimensions.

    f. Proposed setbacks from the Battery Energy Storage System to all existing and proposed structures on participating and non-participating lots.

    g. Dwellings on the property and within five hundred five (500) hundred feet of the lot lines (participating and non-participating lots).

    h. Temporary and permanent access drives.

    i. Screening/landscape detail and berm detail.

    j. Signs.

    k. Plans for land clearing and/or grading required for the installation and operation of the system, and plans for ground cover establishment and management.

    l. Sound modeling study including sound isolines extending from the sound source(s) to the lot lines of adjoining non-participating lots.

m. Planned security measures to prevent unauthorized trespass and access during the construction, operation, removal, maintenance, or repair of the Battery Energy Storage System.

n. A written description of the maintenance program to be used for the Battery Energy Storage System, including decommissioning and removal. The description shall include maintenance schedules, types of maintenance to be performed, and decommissioning and removal procedures and schedules if the Battery Energy Storage System is decommissioned.

o. Planned lightning protection measures.

p. A preliminary equipment specification sheet that documents the proposed battery energy storage system components and associated electrical equipment that are to be installed. A final equipment specification sheet shall be submitted prior to the issuance of a zoning permit.

q. Name, address, and contact information of proposed or potential system installer and the owner and/or operator of the battery energy storage system. Such information of the final system installer shall be submitted prior to the issuance of the zoning permit.

r. Additional detail(s) and information as required by the Special Use requirements of the Zoning Ordinance, or as required by the Planning Commission.

2. **Fire ~~Safety Compliance~~ Reponse Plan**. Such plan shall document and verify that the system and its associated controls and safety systems are in compliance with the Fire Code. Copies of Fire Response Plans shall be maintained at an approved on-site and off-site location accessible to facility personnel, the local fire department, and emergency responders, which should be outside the perimeter fence. The fire response plan shall contain the following:

a. A description of all on-site equipment and systems to be provided to prevent or handle fire emergencies.

b. A description of all contingency plans to be implemented in response to the occurrence of a fire emergency, including evacuation control measures and community notification measures.

c. The results of a toxic and flammable gas plume dispersion analysis for the anticipated BESS equipment in a severe fire emergency scenario to assess potential impacts on surrounding communities.

d. An analysis of whether plans to be implemented in response to a fire emergency can be fulfilled by existing local emergency response capacity. The analysis should include identification of any specific equipment or training deficiencies in local emergency response capacity and recommendations for measures to mitigate deficiencies.

e. A commitment to offer to conduct, or provide funding to conduct, site-specific training drills with local emergency services before commencing operation, and at least once per year while the facility is in operation, at the expense of the project owner. Training should familiarize the local emergency services with the project, hazards, procedures, and current best practices.

f. A commitment to review and update the FRP with local emergency services at least once every three (3) years.

g. Other information the applicant finds relevant.

3. **Emergency ~~Operations~~ Response Plan**. A copy of the approved Emergency Response Plan shall be given to the system owner, the local fire department, and local fire code official. ~~A permanent copy shall also be placed in an approved location to be accessible to facility personnel, fire code officials, and emergency responders~~. Copies of Emergency Operations Plans shall be maintained at an approved on-site and off-site location accessible to facility personnel, the local fire department, and emergency responders, which should be outside the perimeter fence. The emergency ~~operations~~ response plan shall include the following information:

   a. Procedures for safe shutdown, de-energizing, or isolation of equipment and systems under emergency conditions to reduce the risk of fire, electric shock, and personal injuries, and for safe start-up following cessation of emergency conditions.

   b. Procedures for inspection and testing of associated alarms, interlocks, and controls.

   c. Procedures to be followed for summoning service and repair personnel, and providing agreed-upon notification to fire department personnel for potentially hazardous conditions in the event of a system failure.

   d. Emergency procedures to be followed in case of fire, explosion, release of liquids or vapors, damage to critical moving parts, or other potentially dangerous conditions. Procedures can include sounding the alarm, notifying the fire department, evacuating personnel, de-energizing equipment, and controlling and extinguishing the fire.

   e. Response considerations similar to a safety data sheet (SDS) that will address response safety concerns and extinguishment when an SDS is not required.

   f. Procedures for dealing with battery energy storage system equipment damaged in a fire or other emergency event, including maintaining contact information for personnel qualified to safely remove damaged battery energy storage system equipment from the facility.

   g. Other procedures as determined necessary by the Township to provide for the safety of occupants, neighboring properties, and emergency responders.

   h. Procedures and schedules for conducting drills of these procedures and for training local first responders on the contents of the plan and appropriate response procedures.

   i. An identification of potential approach and departure routes to and from the facility site for police, fire, ambulance, and other emergency vehicles.

   j. An analysis of whether plans to be implemented in response to an emergency can be fulfilled by existing local emergency response capacity, and identification of any specific equipment or training deficiencies in local emergency response capacity.

k. A commitment to review and update the ERP with local emergency services at least once every three (3) years.

4. **Decommissioning Plan**. A decommissioning plan is required at the time of application. The decommissioning plan shall include:

   a. The anticipated life of the project.

   b. The anticipated manner in which the project will be decommissioned, including a description of which above-grade and below-grade improvements will be removed, retained (e.g. access drive, fencing), or restored for viable reuse of the property consistent with the zoning district. Removal shall include removing equipment, foundations, and other items so that the ground is restored to its preconstruction state and is ready for development as another land use.

   c. The projected decommissioning costs for removal of the Battery Energy Storage Systems and soil stabilization. The Township may require one (1) or more third-party entities to develop decommissioning cost estimates. If this is required, the Township will select the most appropriate cost estimate.

   d. The method of ensuring that funds will be available for site decommissioning and stabilization (performance guarantee pursuant to **Section 9.4**). The Township shall require the owner or operator to deposit a performance guarantee equal to 1.25 times the estimated decommissioning cost.

      A review of the amount of the performance guarantee based on inflation, salvage value, and current removal costs shall be completed every five (5) years, for the life of the project, and approved by the Township Board. A Battery Energy Storage System owner may at any time:

      (1) Proceed with the decommissioning plan approved by the Planning Commission and remove the system as indicated in the most recent approved plan; or

      (2) Amend the decommissioning plan with Planning Commission approval and proceed according to the revised plan.

5. **Land Clearing and/or Grading Plan**. A plan showing proposed clearing and/or grading as required for the installation and operation of the system.

6. **Stormwater Management Plan.** Computations and design of a stormwater management system. For a BESS in a well-head protection zone and/or if the Fire Response Plan requires liquid agents for firefighting, additional calculations and design of the emergency runoff retention system in the area within ten (10) feet of the BESS shall be submitted.

7. **Pre-Development Sound Modeling Study** including sound isolines extending from the sound source(s) to all lot lines and dwellings on non-participating properties within one thousand (1,000) feet of the property boundary.

8. **Preliminary Equipment Specification Sheet**. Such sheet documents the proposed battery energy storage system components, inverters and associated electrical equipment that are to be installed. A Final Equipment Specification Sheet shall be submitted as part of Post-Construction Reporting.

9. **System Maintenance Plan**. A detailed maintenance schedule covering all affected equipment and the activities performed as outlined in the NFPA 855 Standard for the Installation of Stationary Energy Storage Systems.

10. **Contact Information**. Name, address, and contact information of proposed or potential system installer and the owner and/or operator of the battery energy storage system. Information of the final system installer shall be submitted as part of Post-Construction Reporting.

11. **NFPA 855 Compliance**. Confirmation that the facility complies with the latest edition of NFPA 855 "Standard for the Installation of Stationary Energy Storage Systems."

12. **Additional Studies**. Additional studies may be required by the Planning Commission if reasonably related to the standards of this Ordinance as applied to the application site, including but not limited to:

    a. **Visual Impact Assessment**. A technical analysis by a third-party qualified professional of the visual impacts of the proposed project, including a description of the project, the existing visual landscape, and important scenic resources, plus visual simulations that show what the project will look like (including proposed landscape and other screening measures) a description of potential project impacts, and mitigation measures that would help to reduce the visual impacts created by the project and documented on the site plan.

    b. **Environmental Analysis**. An analysis by a third-party qualified professional to identify and assess any potential impacts on the natural environment including, but not limited to wetlands and other fragile ecosystems, wildlife, endangered and threatened species, historical and cultural sites, and antiquities. If required, the analysis shall identify all appropriate measures to minimize, eliminate or mitigate adverse impacts identified and show those measures on the site plan, where applicable.

    c. **Groundwater Study**. An analysis by a third-party qualified professional that takes into account the planned groundwater use of the Battery Energy Storage System and the impacts on local water resources.

    d. **Property Value Analysis**. An analysis by a third-party qualified professional that evaluates the impact on property value in the Township. The analysis shall take inflation into account.

N. **Abandonment**.

If a Battery Energy Storage System owner or operator has an intent to abandon, and, in fact, does abandon a Battery Energy Storage System by not operating it for twelve (12) continuous months, the Battery Energy Storage System shall be deemed to be abandoned. The applicant/permit holder will be so notified in writing by the Township and requested to dismantle the site and return it to its original state within one hundred (180) days of receipt of notice from the Township of such abandonment. If there are mitigating

circumstances as to why the site has not been used, the applicant/permit holder may contact the Township and request a six-month extension. If a site has been deemed abandoned and no request for an extension is received, the applicant/permit holder will be notified to dismantle the site and return it to its original state. If the applicant/permit holder does not do this within the one hundred (180) day period, the Township will have the removal and restoration done at the owner/applicant's expense.

O. **Post-Approval Documentation.**

Any Zoning Permit or Special Use Permit for any Off-Site BESS shall be conditioned upon the submission of the following documents:

1. **Pre-Construction Documents.** Prior to the commencement of construction activities, the following documents shall be prepared and/or updated in compliance with NFPA 855 and developed in consultation with the local fire department. These shall be submitted to the local fire department and the Zoning Administrator. Copies of all Pre-Construction Documents shall be maintained at an approved on-site location accessible to facility personnel, the local fire department, and emergency responders.

    a. **Final Equipment Specification Sheet.** Documenting the final battery energy storage system components, inverters and associated electrical equipment.

    b. **Contact Information.** Name, address, and contact information of the system installer and the owner and/or operator of the battery energy storage system.

    c. **Amended Emergency Response Plan (ERP) and Fire Response Plan (FRP) (if applicable).** Changes to the design, type, manufacturer, etc. of BESS facilities or equipment after site plan approval must be analyzed to determine if changes are necessary to the ERP or FRP. Additional consultation with local emergency services is required for amended plans.

    d. **Commissioning Plan.** A Commissioning Plan as outlined in NFPA 855.

    e. **Hazard Mitigation Analysis (HMA).** A Hazard Mitigation Analysis as outlined in NFPA 855.

2. **Post-Construction Reporting.** Prior to the commencement of commercial operations, the following documents shall be prepared and/or updated in compliance with NFPA 855 and developed in consultation with the local fire department. These shall be submitted to the local fire department and the Zoning Administrator prior to final inspection and approval by the fire inspector. Copies of all Post-Construction Reporting shall be maintained at an approved on-site location accessible to facility personnel, the local fire department, and emergency responders.

    a. **Amendments or updates to any Pre-Construction Documents**.

    b. **Commissioning Report.** A Commissioning Report as outlined in NFPA 855.72.

    c. **Emergency Operations Plan.** An Emergency Operations Plan as outlined in NFPA 855.73.

3. **Post-Construction Sound Survey.** Documentation of sound pressure level measurements shall be provided to the Zoning Administrator by a third-party qualified professional selected by the Planning

Commission and at the expense of the BESS system owner within six (6) months of the commencement of the operation of the project. The study will be designed to verify compliance with sound standards applicable to this ordinance.

Section 6: Amendment of Section 7.29 (Solar Energy Systems) – formerly Section 7.27.

Section 7.27 is hereby replaced with the following and renumberd to 7.29:

Solar energy facilities shall adhere to the following requirements in addition to the requirements contained in **Section 5.6** (Site Plan Approval Standards) and **Section 6.3** (Special Land Use Approval Standards) of this Ordinance. Solar energy facilities may contain Battery Energy Storage Systems pursuant to **Section 7.28**.

A. **Purpose**.

The purpose of this Section is to provide for the development, installation, and construction of solar energy facilities subject to reasonable conditions that will protect the character of the Township and the nearby property owners and ensure the health, safety, and welfare of Township residents. In developing these standards, the Township recognizes the following:

1. The Township desires to maintain and provide for the preservation of farmland and woodlands, where feasible.

2. The Township wishes to discourage the conversion of farmland into other more intensive uses and recognizes farmland as contributing to the scenic and rural character of the Township.

3. The Township wishes to maximize the most beneficial agricultural use of agricultural lands in the Township, without unnecessarily limiting the economic rights of agricultural landowners.

4. The Township encourages a land use pattern that is oriented to the natural features and water resources of the area.

B. **Scope**.

1. This Section applies to all solar energy facilities whose primary purpose is to supply power to off-site customers.

2. This Section applies to accessory solar panels whose primary purpose is to supply power to on-site customers and which proposes acessory solar panels which will cover one (1) acre or more.

C. **Standards**.

1. **Setbacks**. The setbacks of all solar collection devices and ancillary equipment shall be at least one hundred (100) feet from the road right-of-way and all lot lines of non-participating lots and shall be five

hundred (500) feet from the outer wall of all residences and occupied community buildings on non-participating lots.

2. **Height**. The total height for all solar collection devices shall not exceed twenty-five (25) feet when oriented at maximum tilt.

3. **Reflection/Glare**. Solar collection devices, or a combination of devices, shall be designed and located to avoid glare or reflection onto adjacent properties and adjacent roadways and shall not interfere with traffic or create a safety hazard. This may be accomplished by both the placement and angle of the collection devices as well as human-made or environmental barriers. Plans to reduce glare may be required in the initial materials submitted.

4. **Groundcover and Impervious Surface/Stormwater**.

    a. If more than eight thousand (8,000) square feet of impervious surface will be located on the site, the application shall include a drainage plan prepared by a registered civil engineer showing how stormwater runoff will be managed. If detergents will be used to clean solar panels, details on the type of cleaner, frequency, and quantity of use, and stormwater quality protection measures shall be provided. Any necessary permits from outside agencies for off-site discharge shall be provided.

    b. If groundcover (such as conservation cover, pollinator habitat, forage cover, or agrivoltaics) is utilized, then a drainage plan is not required. The Planning Commission may require soil stabilization through groundcover.

5. **Screening**. The Planning Commission may require that solar devices be screened year-round from view from any existing adjacent non-participating lot line and the public right-of-way by use of a screening wall, evergreen vegetation, or other screening of similar effectiveness and quality, as determined by the Planning Commission. Screening shall look as natural as possible through the use of varying plant materials of varying heights, if possible. Natural vegetation may be counted toward screening requirements. Screening shall be maintained throughout the life of the facility including replacing dead vegetation within six (6) months or at the earliest feasible time of year dependent on the weather. The Planning Commission may reduce or waive screening requirements provided that any such adjustment is in keeping with the intent of the Ordinance.

6. **Wiring**. Wiring (including communication lines) may be buried underground. Any above-ground wiring within the footprint of the solar energy facilities shall not exceed the height of the solar array at maximum tilt.

7. **Lighting**. Solar Energy Facility lighting shall be limited to inverter and/or substation locations only. Light fixtures shall have downlit shielding and be placed to keep light on-site and glare away from adjacent properties, bodies of water, and adjacent roadways. Flashing or intermittent lights are prohibited.

8. **Sound**. The sound pressure level of a solar energy facility and all ancillary solar equipment shall not exceed forty-five (45) dBA (Leq (1 hour)) at the lot line of each adjacent non-participating lot. The site plan shall include modeled sound isolines extending from the sound source to the dwelling. The

applicant may be required to provide operating sound pressure level measurements from a reasonable number of sampled locations to demonstrate compliance with this standard.

9. **Land Clearing**. Land disturbance or clearing shall be limited to what is minimally necessary for the installation and operation of the system and to ensure sufficient all-season access to the solar resource given the topography of the land. Topsoil distributed during site preparation (grading) on the property shall be retained on site.

10. **Access Drives**. New access drives within the Solar Energy Facility shall be designed to minimize the extent of soil disturbance, water runoff, and soil compaction on the premises. The use of geotextile fabrics and gravel placed on the surface of the existing soil for temporary roadways during the construction of the Solar Energy Facility is permitted, provided that the geotextile fabrics and gravel are removed once the Solar Energy Facility is in operation.

11. **Fencing**. Solar Energy Facilities may be secured with perimeter fencing to restrict unauthorized access. Fencing is not subject to setbacks. The Planning Commission may require wildlife-friendly fencing.

12. **Lot Coverage**. Solar collection devices shall not count toward the maximum lot coverage standards in **Section 4.8** (FF-1 District).

13. **Agricultural Protection.** For sites where agriculture is a permitted use in a district, solar energy facilities shall be sited to minimize impacts to agricultural production through site design and accommodations including:

    a. The ground mounting of panels by screw, piling, or a similar system that does not require a footing, concrete, or other permanent mounting in order to minimize soil compaction.

    b. Siting panels to avoid disturbance and compaction of farmland by siting panels along field edges and in nonproduction areas to the maximum extent practicable and financially feasible.

    c. Maintaining all drainage infrastructure on-site, including drain tile and ditches, during the operation of the solar energy facility.

    d. Siting the solar energy facility to avoid isolating areas of the farm operation such that they are no longer viable or efficient for agricultural production, including, but not limited to, restricting the movement of agricultural vehicles/equipment for planting, cultivation, and harvesting of crops, and creating negative impacts on support infrastructure such as irrigation systems or drains.

    e. Voluntarily purchasing agricultural conservation easements from an equivalent number of prime farmland acres if the township has adopted a purchase of development rights ordinance.

D. **Emergencies**.

The Township may require the owner or operator to provide emergency training and/or equipment to local emergency personnel to be able to provide the required level of emergency services safely. Solar Energy Facility shall be maintained in good working order and in accordance with industry standards. Site access shall be maintained, including snow removal at a level acceptable to the local fire department.

E. **Repowering**.

1. In addition to repairing or replacing solar energy components to maintain the system, a solar energy facility may at any time be repowered, without the need to apply for a new Special Use permit, by reconfiguring, renovating, or replacing the solar energy components to increase the power rating within the existing project footprint.

2. A proposal to change the project footprint of an existing solar energy facility shall be considered a new application, subject to the ordinance standards at the time of the request. Expenses for legal services and other studies resulting from an application to modify a solar energy facility will be reimbursed to the Township by the solar energy facility owner in compliance with established escrow policy.

F. **Application for a Solar Energy Facility**.

An applicant shall submit a site plan (the site plan shall meet all of the requirements of the Township Zoning Ordinance and those of the Michigan Public Service Commission) showing the design of all elements to be erected or constructed as a part of the solar energy facility. The site plan shall include the following:

1. All lot lines, dimensions, and setbacks, including a legal description of each lot comprising the Solar Energy Facility.

2. Names of owners of each lot within the Township that is proposed to be within the Solar Energy Facility.

3. Vicinity map showing the location of all surrounding land uses.

4. The location of all solar arrays, including setbacks.

5. The width of arrays.

6. The distance between arrays plus total height (and distance to the lowest edge of the array above grade).

7. Ancillary structures and electrical equipment.

8. Utility connections.

9. Dwellings on the property and within five hundred (500) feet of the lot lines (participating and non-participating lots).

10. Existing and proposed structures as part of the Solar Energy Facility.

11. Buried or above-ground wiring.

12. Temporary and permanent access drives.

13. Fencing detail.

14. Screening/landscape detail and berm detail.

15. Signs.

16. The location of any battery energy storage systems on-site.

17. Plans for land clearing and/or grading required for the installation and operation of the system, and plans for ground cover establishment and management.

18. Sound modeling study including sound isolines extending from the sound source(s) to the lot lines of adjoining non-participating lots.

19. Completed copy of Michigan Pollinator Habitat Planning Scorecard for Solar Sites (when applicable).

20. The location of prime farmland [and/or farmland of statewide importance, farmland of local importance, unique farmland, and prime farmland if drained] as defined in the U.S. Department of Agriculture, Natural Resources Conservation Service - Web Soil Survey.

21. **Additional Studies**. Additional studies may be required by the Planning Commission if reasonably related to the standards of this Ordinance as applied to the application site, including but not limited to:

    a. **Visual Impact Assessment**. A technical analysis by a third-party qualified professional of the visual impacts of the proposed project, including a description of the project, the existing visual landscape, and important scenic resources, plus visual simulations that show what the project will look like (including proposed landscape and other screening measures) a description of potential project impacts, and mitigation measures that would help to reduce the visual impacts created by the project and documented on the site plan.

    b. **Environmental Analysis**. An analysis by a third-party qualified professional to identify and assess any potential impacts on the natural environment including, but not limited to wetlands and other fragile ecosystems, wildlife, endangered and threatened species, historical and cultural sites, and antiquities. If required, the analysis shall identify all appropriate measures to minimize, eliminate, or mitigate adverse impacts identified and show those measures on the site plan, where applicable.

    c. **Stormwater Study**. An analysis by a third-party qualified professional that takes into account the proposed layout of the Solar Energy Facility and how the spacing, row separation, and slope affects stormwater infiltration, including calculations for a one hundred (100) year rain event (storm). Percolation tests or site-specific soil information shall be provided to demonstrate infiltration on-site without the use of engineered solutions.

    d. **Glare Study**. An analysis by a third-party qualified professional to determine if glare from the solar collection devices will be visible from nearby residents and roadways. If required, the

analysis shall consider the changing position of the sun throughout the day and year, and its influence on the facility.

e. **Groundwater Study**. An analysis by a third-party qualified professional that takes into account the planned groundwater use of the Solar Energy Facility and the impacts on local water resources.

f. **Property Value Analysis**. An analysis by a third-party qualified professional that evaluates the impact on property value in the Township. The analysis shall take inflation into account.

g. **Pre-Development Sound Modeling Study** including sound isolines extending from the sound source(s) to all property lines and dwellings on non-participating properties within one thousand (1,000) feet of the property boundary.

22. **Decommissioning Plan**. A decommissioning plan is required at the time of application.

a. The decommissioning plan shall include:

(1) The anticipated life of the project.

(2) The anticipated manner in which the project will be decommissioned, including a description of which above-grade and below-grade improvements will be removed, retained (e.g. access drive, fencing), or restored for viable reuse of the property consistent with the zoning district.

(3) The estimated decommissioning costs in current dollars. Such costs shall not include credit for salvageable value of any materials. The Township may require one (1) or more third party entities to develop decommissioning cost estimates. If this is required, the Township will select the most appropriate cost estimate.

(4) The method of ensuring that funds will be available for site decommissioning and stabilization (in the form of surety bond, irrevocable letter of credit, or cash deposit). The Planning Commission shall require the owner of the solar energy to deposit a performance guarantee in an amount equal to 1.25 times the estimated costs associated with the removal of the solar energy facility and all associated equipment and accessory structures and restoration of the site to a reusable condition which shall include the removal of all underground structures to a depth of five (5) feet below the natural ground level at that location.

The amount of the performance guarantee shall be reviewed every three (3) years. The amount of the performance guarantee shall be increased based on an inflation rate equal to the average of the previous ten (10) years Consumer Price Index. The performance guarantee shall be in the form of a cash deposit, certified check, irrevocable bank letter of credit, or surety bond acceptable to the Township.

b. A solar energy facility owner may at any time:

(1) Proceed with the decommissioning plan approved by the Planning Commission and remove the system as indicated in the most recent approved plan; or

(2) Amend the decommissioning plan with Planning Commission approval and proceed according to the revised plan.

G. **Requirement Prior to Installation**.

No solar energy facilities shall be installed until written evidence has been submitted to the Township that the electric utility company has been informed of the applicant's intent to install a solar energy facility which will generate electric power for distribution by interconnection to the electric power grid of the electric utility company serving the area in which the solar energy facility is located.

H. **Abandoned Solar Energy Facilities**.

1. If a solar energy facility owner or operator intends to abandon and, in fact, does abandon a solar energy facility by not operating it for a continuous period of twelve (12) months, said solar energy facility shall be considered abandoned, and the owner of such solar energy facility shall remove the same within one hundred eighty (180) days of the receipt of a notice of abandonment by the Township. Failure to remove an abandoned solar energy facility within the one hundred eighty (180) day period provided in this subsection shall be grounds for the Township to remove the solar energy facility at the owner's expense. The Planning Commission may grant an extension to this one hundred eighty (180) day period.

2. In addition to removing the solar energy facility, the owner shall restore the site of the solar energy facility to its original condition prior to location of the solar energy facility, subject to reasonable wear and tear. Any foundation associated with a solar energy facility shall be removed to a minimum depth of five (5) feet below the final grade and site vegetation shall be restored. The Planning Commission may require that vegetative screening be removed to provide access to the agricultural site.

I. **Post-Approval Documentation.**

Any Zoning Permit or Special Use Permit for any Utility-Scale Solar Energy System shall be conditioned upon the submission of the following documents:

4. **Post-Construction Sound Survey.** Documentation of sound pressure level measurements shall be provided to the Zoning Administrator by a third-party qualified professional selected by the Planning Commission and at the expense of the Solar Energy System owner within six (6) months of the commencement of the operation of the project. The study will be designed to verify compliance with sound standards applicable to this ordinance.

Section 7: Amendment of Article 7 (Supplemental Regulations).

Section 7.30 (Accessory Solar Panels) is hereby added as follows (formerly part of Section 7.27):

A. **Scope**.

1. This Section applies to Accessory Solar Panels with the primary purpose of providing power on-site.

2. Solar energy panels falling under this Section shall be allowed as a permitted accessory use in all zoning districts subject to the requirements below. A zoning permit shall be required.

3. Accessory solar panels which provide power on-site but which cover more than one (1) acre of land shall fall under **Section 7.28** Utility-Scale Solar Facilities.

B. **Submittal Requirements**.

Applicants shall submit drawings that show the location of the system on the property, height, tilt features (if applicable), the primary structure, accessory structures, and setbacks to lot lines. Accessory solar energy panel applications that meet the ordinance requirements shall be granted administrative approval by the Zoning Administrator.

C. **Height**.

1. Ground-Mounted or Pole-Mounted Accessory Solar Energy Panels shall not exceed twenty (20) feet in height when oriented at maximum tilt.

2. Building-Mounted or Roof-Mounted Accessory Solar Energy Systems shall not exceed the maximum allowed building height in any zoning district.

D. **Setbacks**.

1. Ground-Mounted or Pole-Mounted Accessory Solar Energy Panels shall be located in the rear or side yard and shall be setback a minimum of ten (10) feet from the interior side lot line and ten (10) feet from a rear lot line. The required setback of the corner side lot line shall be equal to the front setback for a principal building in the district.

2. Building-Mounted or Roof-Mounted Accessory Solar Energy Panels shall adhere to district setbacks for a principal building but may encroach into designated principal building setbacks by twelve (12) inches.

E. **Glare.** Panels shall not result in glare onto adjoining properties or public rights of way.

F. **Coverage and Size.** Roof-Mounted or Building-Mounted Accessory Solar Energy Panels shall allow for adequate roof access for fire-fighting purposes. Ground-Mounted or Pole-Mounted Accessory Solar Energy Panels shall not exceed fifty (50) percent of the building footprint for the principal structure.

G. **Nonconformities**.

1. A building-mounted or roof-mounted accessory solar energy panel installed on a nonconforming building or nonconforming use shall not be considered an expansion of the nonconformity.

2. Ground-mounted accessory solar energy panels installed on a nonconforming lot or nonconforming use shall not be considered an expansion of the nonconformity.

H. **Building-Integrated Solar Energy Panels**.

Building-integrated solar energy panels are subject only to zoning regulations applicable to the structure or building and not subject to standards in this Section.

Section 8: Severability

If any clause, sentence, paragraph or part of this Ordinance shall for any reason be finally adjudged by any court of competent jurisdiction to be invalid, such judgment shall not affect, impair or invalidate the remainder of this Ordinance but shall be confined in its operation to the clause, sentence, paragraph or part thereof directly involved in the controversy in which such judgment is rendered.

Section 9: Saving Clause

The Ossineke Township Zoning Ordinance, except as herein or heretofore amended, shall remain in full force and effect. The amendments provided herein shall not abrogate or affect any offense or act committed or done, or any penalty or forfeiture incurred, or any pending fee, assessments, litigation, or prosecution of any right established, occurring prior to the effective date hereof.

Section 10: Effective Date

The ordinance changes shall take effect upon the expiration of seven days after the publication of the notice of adoption.

_____
Kenneth Lobert
Ossineke Township Supervisor

_____
Jo'Lee Dorie
Ossineke Township Clerk

I, Jolee Dorie, Clerk for Ossineke Township, hereby certify that the foregoing is a true and correct copy of Ordinance No. 1 of 2024 of Ossineke Township, adopted by at a meeting of the Township Board of Trustees held on _____, 2024

A copy of the complete ordinance text may be inspected or purchased at the Ossineke Township Hall, at 9041 W. Nicholson Hill Road, Hubbard Lake, Michigan.

Adopted: _____ Published: _____ Effective: _____, subject to PA 110 of 2006 as amended.