

_____ TOWNSHIP

ORDINANCE NO. _____

**AN ORDINANCE TO AMEND THE ZONING ORDINANCE
TO REGULATE SOLAR ENERGY SYSTEMS**

The Township of _____ ordains:

Section 1. Add Definitions to Article X.

The following definitions are added to Article X, Section X of the Zoning Ordinance, and will be placed in the Zoning Ordinances so that all definitions are in alphabetical order:

- A. Abandonment: A Solar Energy System is abandoned if it has not been in operation for a period of one (1) year. This includes a Solar Energy System that was never operational if construction has been halted for a period of one (1) year.
- B. Building Integrated Photovoltaics (BIVPs): A small Solar Energy System that is integrated into the structure of a building, such as solar roof tiles and solar shingles.
- C. Commercial Solar Energy System: A Solar Energy System in which the principal design, purpose, or use is to provide energy to off-site uses or the wholesale or retail sale of generated electricity to any person or entity.
- D. Ground Mounted Solar Energy System: A Private or Commercial Solar Energy System that is not attached to or mounted to any roof or exterior wall of any principal or accessory building.
- E. Private Solar Energy System: A Solar Energy System used exclusively for private purposes and not used for any commercial resale of any energy, except for the sale of surplus electrical energy back to the electrical grid.
- F. Roof or Building Mounted Solar Energy System: A Private Solar Energy System attached to or mounted on any roof or exterior wall of any principal or accessory building, but excluding BIVPs.
- G. Solar Energy System: Any part of a system that collects or stores solar radiation or energy for the purpose of transforming it into any other form of usable energy, including the collection and transfer of heat created by solar energy to any other medium by any means.

Section 2. Add New Section XX, entitled “Solar Energy Systems”

Section XX, entitled “Solar Energy Systems,” is added to Article X of the Township’s Zoning Ordinance. The section reads in its entirety as follows:

Section XX. Solar Energy Systems.

A. General Provisions. All Solar Energy Systems are subject to the following requirements:

1. All Solar Energy Systems must conform to the provisions of this Ordinance and all county, state, and federal regulations and safety requirements, including applicable building codes and applicable industry standards, including those of the American National Standards Institute (ANSI).
2. The Township may revoke any approvals for, and require the removal of, any Solar Energy System that does not comply with this Ordinance.
3. Solar Energy Systems must be located or placed so that concentrated solar glare is not directed toward or onto nearby properties or roadways at any time of the day.
4. Solar Energy Systems are permitted in the Township as follows, subject to this Section XX and other applicable provisions of the Zoning Ordinance:

Type of System	Sub-Type of System	Zoning District	Special Use Permit
Private Solar Energy System	Private BIVPs	All zoning districts	Not required
	Roof or Building Mounted Private Solar Energy System	All zoning districts as accessory use	Not required
	Ground Mounted Private Solar Energy Systems	A-1 (Agricultural)	Required
Commercial Solar Energy System	All Commercial Solar Energy Systems (Ground Mounted only)	A-1 (Agricultural)*	Required

* Commercial Solar Energy Systems are not permitted on any properties enrolled in the PA 116 Farmland and Open Space Preservation Program.

B. Private Solar Energy Systems.

1. Private Solar Energy System BIVPs. Private Solar Energy System BIVPs are permitted in all zoning districts. A building permit is required for the installation of BIVPs.
2. Roof or Building Mounted Private Solar Energy Systems. Roof or Building Mounted Private Solar Energy Systems are permitted in all zoning districts as an accessory use, subject to the following requirements:
 - a. No part of the Solar Energy System erected on a roof is permitted to extend beyond the peak of the roof. If the Solar Energy System is mounted on a building in an area other than the roof, no part of the Solar Energy System is permitted to extend beyond the wall on which it is mounted.

- b. No part of a Solar Energy System mounted on a roof is to be installed closer than three (3) feet from the edges of the roof, the peak, or eave or valley to maintain pathways of accessibility.
- c. No part of a Solar Energy System mounted on a roof is permitted to extend more than two (2) feet above the surface of the roof.
- d. If a Roof or Building Mounted Private Solar Energy System has been abandoned, the property owner must remove it within three (3) months after the date of abandonment.
- e. A building permit is required for the installation of Roof or Building Mounted Private Solar Energy Systems.

3. Ground Mounted Private Solar Energy Systems. Ground Mounted Private Solar Energy Systems are allowed only in the A-1, Agricultural, zoning district and require a special land use permit and site plan review. In addition to all requirements for a special land use permit under Article X and site plan review and approval under Article X, Ground Mounted Private Solar Energy Systems are also subject to the following requirements:

- a. *Site Plan.* Before installation of a Ground Mounted Private Solar Energy System, the property owner must submit a site plan to the Zoning Administrator. The site plan must include setbacks, panel size, and the location of property lines, buildings, fences, greenbelts, and road right of ways. The site plan must be drawn to scale.
- b. *Maximum Height.* A Ground Mounted Private Solar Energy System must not exceed the maximum building height for adjacent accessory buildings and must not exceed fifteen (15) feet above the ground when oriented at maximum tilt.
- c. *Location.* A Ground Mounted Private Solar Energy System must be located in the rear yard and meet the rear yard setback requirements applicable in the A-1 zoning district.
- d. *Underground Transmission.* All power transmission or other lines, wires, or conduits from a Ground Mounted Private Solar Energy System to any building or other structure must be located underground. If batteries are used as part of the Ground Mounted Private Solar Energy System, they must be placed in a secured container or enclosure.
- e. *Screening.* Greenbelt screening is required around any Ground Mounted Private Solar Energy System and around any equipment associated with the system to obscure, to the greatest extent possible, the Solar Energy System from any adjacent residences. The greenbelt must consist of shrubbery, trees, or other non-invasive plant species that provide a visual screen. In lieu of a planting

greenbelt, a decorative fence that is at least 50% opaque (meeting the requirements of this Ordinance applicable to fences) may be used if approved by the Planning Commission.

- f. *Lot Area Coverage.* No more than 20% of the total lot area may be covered by a Ground Mounted Private Solar Energy System.
- g. *Appearance.* The exterior surfaces of a Ground Mounted Private Solar Energy System must be generally neutral in color and substantially non-reflective of light.
- h. *Abandonment.* If a Ground Mounted Private Solar Energy System has been abandoned, the property owner must notify the Township and remove the system within three (3) months after the date of abandonment.
- i. *Building Permit.* A building permit is required for installation of a Ground Mounted Private Solar Energy System.
- j. *Transferability.* A special use permit for a Ground Mounted Private Solar Energy System is transferable to a new owner. The new owner must register its name and business address with the Township and must comply with this Ordinance and all approvals and conditions issued by the Township.
- k. *Remedies.* If an applicant or operator of a Ground Mounted Solar Energy System fails to comply with this Ordinance, the Township, in addition to any other remedy under this Ordinance, may revoke the special land use permit and site plan approval after giving the applicant notice and an opportunity to be heard. Additionally, the Township may pursue any legal or equitable action to abate a violation and recover any and all costs, including the Township's actual attorney fees and costs.

C. Commercial Solar Energy Systems. Commercial Solar Energy Systems are allowed only in the A-1, Agricultural, zoning district (except they are not permitted on any properties enrolled in the PA 116 Farmland and Open Space Preservation Program) and require a special land use permit and site plan review. In addition to all requirements for a special land use permit under Article X and site plan review and approval under Article X, Commercial Solar Energy Systems are also subject to the following requirements:

1. *Application Requirements.* The applicant for a Commercial Solar Energy System must provide the Township with all of the following:

- a. Application fee in an amount set by resolution of the Township Board.

- b. A list of all parcel numbers that will be used by the Commercial Solar Energy System; documentation establishing ownership of each parcel; and any lease agreements, easements, or purchase agreements for the subject parcels.
- c. An operations agreement setting forth the operations parameters, the name and contact information of the certified operator, the applicant's inspection protocol, emergency procedures, and general safety documentation.
- d. Current photographs of the subject property.
- e. A site plan that includes all proposed structures and the location of all equipment, transformers, and substations, as well as all setbacks, panel sizes, and the location of property lines, signage, fences, greenbelts and screening, drain tiles, easements, floodplains, bodies of water, proposed access routes, and road right of ways. The site plan must be drawn to scale and must indicate how the Commercial Solar Energy System will be connected to the power grid.
- f. A copy of the applicant's power purchase agreement or other written agreement with an electric utility showing approval of an interconnection with the proposed Commercial Solar Energy System.
- g. A written plan for maintaining the subject property, including a plan for maintaining and inspecting drain tiles and addressing stormwater management, which is subject to the Township's review and approval.
- h. A decommissioning and land reclamation plan describing the actions to be taken following the abandonment or discontinuation of the Commercial Solar Energy System, including evidence of proposed commitments with property owners to ensure proper final reclamation, repairs to roads, and other steps necessary to fully remove the Commercial Solar Energy System and restore the subject parcels, which is subject to the Township's review and approval.
- i. Financial security that meets the requirements of this Section, which is subject to the Township's review and approval.
- j. A plan for resolving complaints from the public or other property owners concerning the construction and operation of the Commercial Solar Energy System, which is subject to the Township's review and approval.
- k. A plan for managing any hazardous waste, which is subject to the Township's review and approval.

- l. A transportation plan for construction and operation phases, including any applicable agreements with the County Road Commission and Michigan Department of Transportation, which is subject to the Township's review and approval.
- m. An attestation that the applicant will indemnify and hold the Township harmless from any costs or liability arising from the approval, installation, construction, maintenance, use, repair, or removal of the Solar Energy System, which is subject to the Township's review and approval.
- n. Proof of environmental compliance, including compliance with Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act; (MCL 324.3101 et. seq.; Part 91, Soil Erosion and Sedimentation Control (MCL 324.9101 et. seq.) and any corresponding County ordinances; Part 301, Inland Lakes and Streams, (MCL 324.30101 et. seq.); Part 303, Wetlands (MCL 324.30301 et. seq.); Part 365, Endangered Species Protection (MCL324.36501 et. seq.); and any other applicable laws and rules in force at the time the application is considered by the Township
- o. Any additional information or documentation requested by the Planning Commission, Township Board, or other Township representative.

2. *System and Location Requirements.*

- a. Commercial Solar Energy Systems must be ground mounted.
- b. Commercial Solar Energy Systems must be located on parcels of land twenty (20) acres in size or larger.
- c. Commercial Solar Energy Systems are not permitted on any properties enrolled in the PA 116 Farmland and Open Space Preservation Program.
- d. Commercial Solar Energy Systems (including all solar panels, structures, and equipment) must be set back 500 feet from all lot lines and public road rights-of-way. If a single Commercial Solar Energy System is located on more than one lot, then the lot-line setbacks of this subsection do not apply to the lot lines shared by those lots.
- e. The height of the Commercial Solar Energy System and any mounts, buildings, accessory structures, and related equipment must not exceed fifteen (15) feet when oriented at maximum tilt. Lightning rods may exceed 15 feet in height, but they must be limited to the

height necessary to protect the Commercial Solar Energy System from lightning.

3. *Lot Area Coverage.* No more than 20% of the total lot area may be covered by a Commercial Solar Energy System.

4. *Permits.* All required county, state, and federal permits must be obtained before the Commercial Solar Energy System begins operating.

5. *Screening.* Greenbelt screening is required around any Commercial Solar Energy System and around any equipment associated with the system to obscure, to the greatest extent possible, the Solar Energy System from any adjacent residences. The greenbelt must consist of shrubbery, trees, or other non-invasive plant species that provide a visual screen. At least 50% of the plants must be evergreen trees that are at least six feet tall at the time of planting. In lieu of a planting greenbelt, a decorative fence that is at least 50% opaque and that meets the requirements of this Ordinance applicable to fences may be used if approved by the Planning Commission.

6. *Lighting.* Lighting of the Commercial Solar Energy System is limited to the minimum light necessary for safe operation. Illumination from any lighting must not extend beyond the perimeter of the lot(s) used for the Commercial Solar Energy System. The Commercial Solar Energy System must not produce any glare that is visible to neighboring lots or to persons traveling on public or private roads.

7. *Security Fencing.* Security fencing must be installed around all electrical equipment related to the Commercial Solar Energy System, including any transformers and transfer stations. Appropriate warning signs must be posted at safe intervals at the entrance and around the perimeter of the Commercial Solar Energy System.

8. *Noise.* The noise generated by a Commercial Solar Energy System must not exceed the following limits:

- a. Forty (40) Dba Lmax, as measured at the property line of any adjacent R-1 (Residential) or B-1 (Business) zoned land in existence at the time the Commercial Solar Energy System is granted special land use approval.
- b. Forty (40) Dba Lmax, as measured at any neighboring residence in existence at the time the Commercial Solar Energy System is granted special land use approval, between the hours of 9:00 p.m. and 7:00 a.m.
- c. Forty (40) Dba Lmax, as measured at the lot lines of the project boundary.
- d. In addition to the above limitations, a sound barrier of a solid decorative masonry wall or evergreen tree berm, with trees spaced not less than 10 feet apart, must be constructed to reduce noise levels surrounding all inverters. The berm must be no more than ten (10)

feet from all inverters, must be at least as tall as all inverters but not more than three (3) feet taller than the height of all inverters.

9. *Underground Transmission.* All power transmission or other lines, wires, or conduits from a Commercial Solar Energy System to any building or other structure must be located underground at a depth that complies with current National Electrical Code standards, except for power switchyards or the area within a substation. If batteries are used as part of the Ground Mounted Solar Energy System, they must be placed in a secured container or enclosure.

10. *Drain Tile Inspections.* The Commercial Solar Energy System must be maintained in working condition at all times while in operation. The applicant or operator must inspect all drain tile at least once every three years by means of robotic camera, with the first inspection occurring before the Commercial Solar Energy System is in operation. The applicant or operator must submit proof of the inspection to the Township. The owner or operator must repair any damage or failure of the drain tile within sixty (60) days after discovery and submit proof of the repair to the Township. The Township is entitled, but not required, to have a representative present at each inspection or to conduct an independent inspection.

11. *Insurance.* The applicant or operator will maintain property/casualty insurance and general commercial liability insurance in an amount of at least \$10 million per occurrence.

12. *Decommissioning.* If a Commercial Solar Energy System is abandoned or otherwise nonoperational for a period of one year, the property owner or the operator must notify the Township and must remove the system within six (6) months after the date of abandonment. Removal requires receipt of a demolition permit from the Building Official and full restoration of the site to the satisfaction of the Zoning Administrator. The site must be filled and covered with top soil and restored to a state compatible with the surrounding vegetation. The requirements of this subsection also apply to a Commercial Solar Energy System that is never fully completed or operational if construction has been halted for a period of one (1) year.

13. *Financial Security.* To ensure proper decommissioning of a Commercial Solar Energy System upon abandonment, the applicant must post financial security in the form of a security bond, escrow payment, or irrevocable letter of credit in an amount equal to 125% of the total estimated cost of decommissioning, code enforcement, and reclamation, which cost estimate must be approved by the Township. The operator and the Township will review the amount of the financial security every two (2) years to ensure that the amount remains adequate. This financial security must be posted within fifteen (15) business days after approval of the special land use application.

14. *Extraordinary Events.* If the Commercial Solar Energy System experiences a failure, fire, leakage of hazardous materials, personal injury, or other extraordinary or catastrophic event, the applicant or operator must notify the Township within 24 hours.

15. *Annual Report.* The applicant or operator must submit a report on or before January 1 of each year that includes all of the following:

- a. Current proof of insurance;

- b. Verification of financial security; and
- c. A summary of all complaints, complaint resolutions, and extraordinary events.

16. *Inspections.* The Township may inspect a Commercial Solar Energy System at any time by providing 24 hours advance notice to the applicant or operator.

17. *Transferability.* A special use permit for a Commercial Solar Energy System is transferable to a new owner. The new owner must register its name and business address with the Township and must comply with this Ordinance and all approvals and conditions issued by the Township.

18. *Remedies.* If an applicant or operator fails to comply with this Ordinance, the Township, in addition to any other remedy under this Ordinance, may revoke the special land use permit and site plan approval after giving the applicant or operator notice and an opportunity to be heard. Additionally, the Township may pursue any legal or equitable action to abate a violation and recover any and all costs, including the Township's actual attorney fees and costs.

Section 3. Amend Section XX.

Section XX of the Zoning Ordinance, entitled A-1 Agricultural Zoning District is amended to add the following uses permitted by special land use permit:

- Ground Mounted Private Solar Energy System
- Commercial Solar Energy System

Section 4. Validity and Severability.

If any portion of this Ordinance is found invalid for any reason, such holding will not affect the validity of the remaining portions of this Ordinance.

Section 5. Repealer.

All other ordinances inconsistent with the provisions of this Ordinance are hereby repealed to the extent necessary to give this Ordinance full force and effect.

Section 6. Effective Date.

This Ordinance takes effect seven (7) days after publication as provided by law.