

**KEENE TOWNSHIP**

**ORDINANCE NO.: 24-11-12**

**ADOPTED DATE: 11-12-2024**

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

The Township of Keene ordains:

**Section 1. Add Definitions to Article 2 and to amend certain definitions to state in full as follows:**

(1) The following definitions are added to Article 2, Section 2.01 of the Zoning Ordinance, and will be placed in the Zoning Ordinances so that all definitions are in alphabetical order:

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.

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.

Commercial Solar Energy Project is a utility-scale commercial project or facility that converts energy into electricity, whether by photovoltaics (PV) or various experimental solar technologies, for the primary purpose of wholesale or retail sales of generated electricity.

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.

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.

Solar Energy System: A Solar Energy System including both Private Solar Energy Systems and Commercial Solar Energy Systems.

(2) The following definitions are amended to state in full as follows:

- cc. Solar Photovoltaic (Solar PV) System – Solar systems consisting of photovoltaic cells, made with semiconducting materials, that produce electricity (in the form of direct current (DC)) when they are exposed to sunlight. A typical PV system consists of PV panels (or modules) that combine to form an array; other system components may include mountain racks and hardware, wiring for electrical connections, power conditioning equipment, such as an inverter and/or batteries

**Section 2. Repeal and Replace Section 12.27 L of the Township Zoning Ordinance**

Subsection (L) of Section 12.27, currently entitled “Commercial Solar Energy System,” is repealed in its entirety. In its place, the Township adopts new Subsection (L) of Section 12.27, entitled “Solar Energy Systems,” which reads in its entirety as follows:

**Section 12.27 (L). 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.
  2. The Township Board may revoke any approvals for, and require the removal of, any Solar Energy System that does not comply with this Ordinance following notice and a public hearing.
  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 12.27 (L). and other applicable provisions of the Zoning Ordinance:

<b>Type of System</b>	<b>Sub-Type of System</b>	<b>Zoning District</b>	<b>Special Use Permit</b>
Private Solar Energy System	Private BIVPs	All zoning districts	Not required
	Roof or Building Mounted Private Solar Energy System	All zoning districts	Not required
	Small Collector Private Solar Energy Systems (Less Than 50 SF Size Panel Array)	All zoning districts as accessory use	Not Required
	Medium Ground or Pole Mounted Private Solar Energy Systems (51-739 SF Size of Array)	All zoning districts as accessory use	Zoning Permit Required
	Large Ground or Pole Mounted Private Solar Energy Systems (740 SF or larger Size of Array)	All zoning districts as accessory use	Required
Commercial Solar Energy System	All Commercial Solar Energy Systems (Ground Mounted only)	AR Agriculture Residential AG Agriculture	Required

B. Commercial Solar Energy Systems. Commercial Solar Energy Systems may only be permitted in the AR Agriculture Residential and AG Agriculture zoning districts in the areas set forth at D and require a special land use permit and site plan review. In addition to all requirements for a special land use permit under Article 12 and site plan review and approval under Article 19, Commercial Solar Energy Systems are also subject to the requirements set forth in this Section 12.27(L).

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

1. Application fee in an amount set by resolution of the Township Board.
2. 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.
3. 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.
4. Current photographs of the subject property.
5. 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.
6. 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.
7. 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.
8. 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.
9. Financial security that meets the requirements of this Section, which is subject to the Township's review and approval.

10. 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.
11. A plan for managing any hazardous waste, which is subject to the Township's review and approval. The project developer and project owner shall be responsible for up to date training and any special equipment needed for an emergency handled by the local Fire Departments for the life of the project. An emergency plan or policy shall be submitted to the Township and the local Fire Departments and approved by the local Fire Chiefs.
12. 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.
13. 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.
14. 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. MSDS Manufacturer Material Safety Data Sheet(s) shall be provided and must include the type and quantity of all materials used in the operation of all equipment.
15. Any additional information or documentation requested by the Planning Commission, Township Board, or other Township representative.

D. System and Location Requirements.

1. Commercial Solar Energy Systems must be ground mounted.
2. Commercial Solar Energy Systems must be located on parcels of land 10 acres in size or larger.
3. Commercial Solar Energy Systems, including panels, inverters and related equipment are only permitted within the land areas as described below and shown on separate maps within 2 possible solar overlay areas.

**Overlay district #1 (North District) 258 acres**

Boundary:

Start point (northwest corner of boundary): 200 yds (600 ft) east and 200 yds (600 ft) south of the intersection of Feuerstein Rd and Richmond Rd.

Thence South 737 yds (2,211 ft) parallel to Feuerstein Rd (west boundary line)

Thence East 1,760 yds (5,280 ft / 1 mile) parallel to Sparks Rd (south boundary line)

Thence North 517 yds (1,551 ft) parallel to Lee Rd (partial east boundary line)

Thence West 220 yds (660 ft) parallel to Richmond Rd (partial north boundary line)

Thence North approximately 220 yds (660 ft) to a point 200 yds (600 ft) south of Richmond Rd (partial east boundary line)

Thence West 1,540 yds (4,620 ft) parallel to Richmond Rd back to start point (partial north boundary line)

**Overlay district #2 (South District) 400 acres**

Start point (northwest corner of boundary): 888 yds (2,664 ft) east of Harley Rd and 1080 yds (3,240 ft) south of Potters Rd.

Thence South 1,100 yds (3,300 ft) parallel to Harley Rd (west boundary line)

Thence East 1,760 yds (5,280 ft / 1 mile) parallel to Rickert Rd (south boundary line)

Thence North 1,100 yds (3,300 ft) parallel to Hawley Hwy (east boundary line)

Thence West 1,760 yds (5280 ft / 1 mile) parallel to Potters Rd (north boundary line) back to start point

4. Commercial Solar Energy Systems (including all solar panels, structures, and equipment) must be set back 400 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.
5. The height of the Commercial Solar Energy System and any mounts, buildings, accessory structures, and related equipment must not exceed 18 feet when oriented at maximum tilt. Lightning rods may exceed 18 feet in height, but they must be limited to the height necessary to protect the Commercial Solar Energy System from lightning.
6. Permits. All required county, state, and federal permits must be obtained before the Commercial Solar Energy System begins operating.
7. 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, at a minimum, 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. Continuous growth vegetation to be established under and around the panels to prevent erosion. 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. Subject to Township review and approval.

8. 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.

9. Security Fencing. Security fencing must be installed around all electrical equipment related to the Commercial Solar Energy System, including any transformers and transfer stations. Fencing should consist of small wildlife friendly woven wire. Appropriate warning signs must be posted at safe intervals at the entrance and around the perimeter of the Commercial Solar Energy System.

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

- a. 40 Dba Lmax, as measured at the property line of any adjacent LDR, RR NR (Residential) or CC (Business) zoned land in existence at the time the Commercial Solar Energy System is granted special land use approval.
- b. 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. 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. All inverters shall be placed toward the interior center areas of the solar panels to be farthest away from the edge of the setback lines.

11. 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. Evidence of acceptable range of any stray voltage must be provided.

12. 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 fifteen (15) days or reasonable time frame approved by the Township. 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.
13. 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.
14. Decommissioning. If a Commercial Solar Energy System is abandoned or otherwise nonoperational for a period of 6 months, 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 6 months.
15. 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.
16. 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.
17. 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.

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

19. 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 within 30 days and must comply with this Ordinance and all approvals and conditions issued by the Township.

20. 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.

E. Commercial Solar Energy Systems under State Act PA 233.

On or after November 29, 2024, if PA 233 of 2023 is in effect, then the following provisions apply to Commercial Solar Energy Systems with a nameplate capacity of 50 megawatts or more. As to those provisions which conflict with the provisions in subsections (A-D) above, these provisions control as to such Commercial Solar Energy Systems. This subsection does not apply if PA 233 of 2023 does not take effect and does not apply to Commercial Solar Energy Systems with a nameplate capacity of less than 50 megawatts.

- 1. Setbacks. Commercial Solar Energy Systems must comply with the following minimum setback requirements, with setback distances measured from the nearest edge of the perimeter fencing of the facility, or as subsequently amended:

<b>Setback Description</b>	<b>Setback Distance</b>
Occupied community buildings and dwellings on nonparticipating properties	300 feet from the nearest point on the outer wall
Public road right-of-way	50 feet measured from the nearest edge of a public road right-of-way
Nonparticipating parties	50 feet measured from the nearest shared property line



2. Fencing. Fencing for the Commercial Solar Energy System must comply with the latest version of the National Electric Code as November 29, 2024, or as subsequently amended.
3. Height. Solar panel components must not exceed a maximum height of 25 feet above ground when the arrays are at full tilt.
4. Noise. The Commercial Solar Energy System must not generate a maximum sound in excess of 55 average hourly decibels as modeled at the nearest outer wall of the nearest dwelling located on an adjacent nonparticipating property. Decibel modeling shall use the A-weighted scale as designed by the American National Standards Institute.
5. Lighting. The Commercial Solar Energy System must implement dark sky-friendly lighting solutions.
6. Environmental Regulations. The Commercial Solar Energy System must comply with applicable state or federal environmental regulations.
7. Host community agreement. Developer will pay the Township \$2,000 per megawatt of nameplate capacity ("Megawatt Payment"). The Megawatt Payment shall be due in full at least seven (7) days prior to commencement of any construction of the Project. Developer will fully cooperate with the Township in submitting an application for an award from the State of Michigan under the Renewable Ready Communities Award ("RRCA") program, including but not limited to completion of the Developer Questionnaire, contingent on the Project being developed under this Agreement.

**Section 3. Amend Section 6.03 H in AR to read as follows:**

H. Commercial Solar Energy Systems subject to, and only in land areas set forth at, in section 12.27 L.

**Section 4. Amend Section 5.03 H in AG to read as follows:**

H. Commercial Solar Energy Systems subject to, and only in land areas set forth at, in section 12.27 L.

**Section 5. 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 6. 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 7. Effective Date.**

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

**ADOPTED:**

Yeas: 3

Nays: 1

Abstain 1

Absent 0

STATE OF MICHIGAN )

COUNTY OF IONIA )

I, Tami Hardy, the undersigned, the duly elected Clerk of Keene Township, Ionia County, Michigan, DO HEREBY CERTIFY that the foregoing is a true and complete representation of certain proceedings conducted by the Board of Trustees of said Township at a meeting held on this 12 day of November, 2024. Further, I certify I caused the same to be published in the Sentinel Standard, Ionia, Michigan, within fifteen (15) days after adoption by the Township Board of the Township of Keene.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 12 day of November, 2024.

Tami Hardy Keene Township Clerk  
Tami Hardy

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