

# AN ORDINANCE TO AMEND THE ZONING ORDINANCE TO IMPLEMENT REGULATIONS REGARDING SOLAR ENERGY

The Township of Harrisville ordains:

## **SECTION 1. ADD DEFINITIONS TO SECTION 2.1.**

The following definitions are hereby added to Section 2.1 of the Zoning Ordinance and shall read as follows:

Freestanding or Ground-Mounted Solar Energy System shall mean any solar energy system that is directly installed in the ground and is not attached or affixed to an existing structure.

Photovoltaic (PV) Systems shall mean a solar energy system that produces electricity by the use of semiconductor devices, called photovoltaic cells that generate electricity whenever light strikes them.

Rooftop and Building-Mounted Solar System shall mean any solar power system in which solar panels are mounted on top of the structure of a roof either as a flush-mounted system or as modules fixed to frames which can be tilted toward the south at an optimal angle.

Solar Energy System (SES) shall mean any equipment necessary to the process by which solar radiation is collected, converted into another form of energy, stored, protected from unnecessary dissipation and distributed. Solar energy systems consist primarily of solar thermal, photovoltaic and concentrated solar, but may include other various experimental solar technologies.

1. Commercial SES shall mean any SES facility and accessory structures or use that is designed and built to exclusively provide electricity to the electric utility's power grid and is not accessory to any other use. The commercial SES is a principal use of property and may occupy the same property as another principal use.
2. Private SES shall mean any SES that is accessory to a principal use located on the same lot, and is designed and built to serve the principal use. These systems shall not be utilized for any commercial sale of energy, except for the sale of surplus electrical energy back to the electrical grid.

Solar-Thermal Systems shall mean a solar energy system which directly heats water or other liquids using sunlight. The heated liquid is used for such purposes as space heating and cooling, domestic hot water, and heating pool water.

**BUILDING INTEGRATED PHOTOVOLTAICS (BIPVs):** A Private or Commercial Solar Energy System that is integrated into the structure of a building, such as solar roof tiles and solar shingles.

**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 but not limited to the collection and transfer of heat created by solar energy to any other medium by any means.

**PRIVATE SOLAR ENERGY SYSTEM:** A Solar Energy System used exclusively for private purposes and not utilized for any commercial resale of any energy, except for the sale of surplus electrical energy back to the electrical grid.

**COMMERCIAL SOLAR ENERGY SYSTEM:** A Solar Energy System where the principal design, purpose or use of such system is to provide energy to off-site uses or the wholesale or retail sale of generated electricity to any person or entity.

**ROOF OR BUILDING MOUNTED SOLAR ENERGY SYSTEM:** A Private or Commercial Solar Energy System attached to or mounted on any roof or exterior wall of any principal or accessory building, but excluding BIVPs.

**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.

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

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

**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.

**SECTION 2. SOLAR ENERGY SYSTEMS TO SECTION 4.0.**

<b>TABLE OF PERMITTED USES &amp; SPECIAL LAND USES</b>					
R = Permitted by right S = Permitted with a Special Use Permit *Indicates that supplemental development standards apply (Article 7).	A, R-1	R-2	FR	C-1, C-2	I
<b>UTILITIES/ENERGY</b>					
<i>Electrical Transformer Stations &amp; Substations (with service storage yards)</i>				S	
<i>Essential Services</i>	R	R	R	R	R
<i>Gas Regulator Stations</i>	R		R	R	R
<i>Heating &amp; Electric Power Generating Plants</i>					S
<i>Public Utility Facilities (without storage yards)</i>	S			R	R
<i>Public Utility Facilities (with storage yards)</i>	S				R
<i>Solar Energy System, Commercial</i>	S				S
<i>Solar Energy System, Private</i>	R	R	R	R	R
<i>Wind Energy Facilities and Anemometer Towers (Commercial)*</i>	S			S	S
<i>Wind Energy Systems (small on-site)*</i>	R	R	R	R	R

**SECTION 3. ADDITION OF SECTION 7.31 TO ZONING ORDINANCE ENTITLED “SOLAR ENERGY SYSTEMS”.**

Section 7.31 entitled “SOLAR ENERGY SYSTEMS” is hereby added to the Township’s Zoning Ordinance. The section shall read in its entirety as follows:

**Section 7.31. SOLAR ENERGY SYSTEMS.**

A. **GENERAL REQUIREMENTS.** All Solar Energy Systems are subject to the following general requirements:

1. All Solar Energy Systems must conform to the provisions of this Ordinance and all County, State, and Federal regulations and safety requirements as well as applicable industry standards.
2. Solar Energy Systems shall be located or placed so that concentrated solar glare shall not be directed toward or onto nearby properties or roadways at any time of the day.

B. **PRIVATE SOLAR ENERGY SYSTEMS.**

1. **Private Solar Energy System BIVPs.** Private Solar Energy System BIVPs shall be permitted in all zoning districts, provided such BIVPs conform to applicable County, State and Federal regulations and safety requirements, including the Michigan Building Code. A zoning permit shall be required for the installation of any BIVPs larger than 100 square feet.

2. **Roof or Building Mounted Private Solar Energy Systems.** Roof or building mounted Private Solar Energy Systems shall be considered an accessory use in all zoning districts, subject to the following requirements:

- a) No part of the Solar Energy System erected on a roof shall 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 shall extend beyond the wall on which it is mounted.
- b) No part of a Solar Energy System mounted on a roof shall be installed closer than three (3) feet from the edges of the roof, the peak, or eave or valley in order to maintain pathways of accessibility.
- c) No part of a Solar Energy System mounted on a roof shall extend more than two (2) feet above the surface of the roof.
- d) 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.
- e) In the event that a roof or building mounted Solar Energy System has been abandoned (meaning not having been in operation for a period of one (1) year), it shall be removed by the property owner within six (6) months from the date of abandonment.
- f) Homeowner shall provide verification of operation (solar energy used by or purchased by utility company) annually to the zoning administrator.
- g) A zoning permit shall be required for installation of roof or building mounted Private Solar Energy Systems.

3. **Ground Mounted Private Solar Energy Systems.** Ground mounted Private Solar

Energy Systems shall be considered an accessory use in all zoning districts, subject to the following requirements:

- a) Prior to the installation of a ground mounted Solar Energy System, the property owner shall submit a site plan (reference article 15 site plans) to the Zoning Administrator. The site plan shall 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) A ground mounted Solar Energy System shall not exceed the maximum building height for adjacent accessory buildings, but in no case shall the maximum height of any ground mounted Solar Energy System exceed fifteen (15) feet above the ground when oriented at maximum tilt.
- c) A ground mounted Solar Energy System shall be located in the rear yard and shall meet the rear yard setback requirements applicable in the zoning district in which the Solar Energy System will be located. If no solar access is available in the rear yard, a request can be brought to the Planning Commission for permission to place the ground mounted SES elsewhere on the property.
- d) All power transmission or other lines, wires or conduits from a ground mounted Solar Energy System to any building or other structure shall be located underground. If batteries are used as part of the ground mounted Solar Energy System, they must be placed in a secured container or enclosure.
- e) There shall be greenbelt screening around any ground mounted Solar Energy Systems and equipment associated with the system to obscure, to the greatest extent possible, the Solar Energy System from any adjacent residences. The greenbelt shall consist of native shrubbery, trees, or other native, non-invasive plant species that provide a visual screen.
- f) Ground-mounted accessory solar energy panels installed on a nonconforming lot or nonconforming use shall not be considered an expansion of the nonconformity.
- g) In the event that a ground mounted Solar Energy System has been abandoned (meaning not having been in operation for a period of one (1) year), the property owner shall notify the Township and shall remove the system within six (6) months from the date of abandonment.
- h) A zoning permit shall be required for installation of a ground mounted Solar Energy System.

### **C. COMMERCIAL SOLAR ENERGY SYSTEMS.**

Commercial Solar Energy Systems shall only be allowed in the Agricultural-Residential District or the Industrial District as a special use approved by the Planning Commission. In addition to any other requirements for special use approval, Commercial Solar Energy Systems shall be ground mounted and

are subject to the following requirements:

1. The property owner or applicant for a Commercial Solar Energy System shall provide the Planning Commission with proof of ownership of the subject property, a copy of any lease agreement for a commercial solar energy system, together with an operations agreement, which shall set forth the operations parameters, the name and contact information of the certified operator, inspection protocol, emergency procedures and general safety documentation.
  - a) Ground water test submitted to Zoning Administrator prior to installation, upon completion of installation and annually until site restoration is completed.
2. The Commercial Solar Energy System all Photovoltaic (PV) systems and support structures associated with such facilities (excluding perimeter fencing) shall be setback a minimum of forty (40) feet from a side or rear property line and a minimum of fifty (50) feet from any road right-of-way. Setbacks should be measured when the panel is at minimum tilt.
3. The height of the Commercial Solar Energy System and any mounts shall not exceed fifteen (15) feet when oriented at maximum tilt.
4. Solar devices shall be screened year-round from view from any existing residential use and the public right-of-way by use of a screening wall of native shrubbery, trees, or other native, non-invasive plant species that provide a visual screen of effectiveness and quality, as determined by the Planning Commission. Screening shall be installed which screens the facility fully from view from the time of planting or installation. 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 the year dependent on the weather.
5. 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 property line of an adjacent non-participating lot at 2 a.m. The site plan shall include modeled sound isolines extending from the sound source to the property lines to demonstrate compliance with this standard. The applicant is responsible for testing d.BA levels annually and submitting the results to the Zoning Administrator.
6. Prior to installation, the applicant shall submit a descriptive site plan (reference article 15 for site plan requirements) to the Planning Commission which includes where and how the Commercial Solar Energy System will connect to the power grid.
7. No Commercial Solar Energy System shall be installed until evidence has been given to the Planning Commission that the electric utility company has agreed to an interconnection with the electrical grid or a power purchase agreement. Any such agreement shall be furnished to the Planning Commission.
8. Developer/applicant shall provide verification of operation (solar energy used by or purchased by utility company) annually to the zoning administrator.
9. A condition of every approval of a Commercial Solar Energy System shall have an adequate

provision for the removal of the system whenever it ceases to be used for one (1) year or more. In the event that a system has been abandoned (meaning not having been in operation for a period of one (1) year). Either the zoning administrator or the property owner and developer/applicant shall notify the Township that the SES is abandoned, and the property owner and developer/applicant shall remove the system within one (1) year from the date of abandonment. Removal includes the proper receipt of a demolition permit from the Building Official and proper restoration of the site to the satisfaction of the Zoning Administrator. The site shall then be filled and covered with topsoil and restored to a state compatible with the surrounding vegetation.

10. To ensure proper removal of a Commercial Solar Energy System upon discontinued use or abandonment, applications shall include a description of the financial security guaranteeing removal of the system which must be posted with the Township within fifteen (15) days after approval or before a construction permit is issued for the facility. The financial security shall be a performance bond (surety bond), in a form approved by the Township. The amount of such guarantee shall be no less than 150% of the estimated cost of removal and may include a provision for inflationary cost adjustments. The estimate shall be prepared by the engineer for the developer and shall be approved by the Township. The applicant shall be responsible for the payment of any costs or attorney fees incurred by the Township in securing removal.
  - a. The financial resources for decommissioning shall be 150% of the estimated removal and restoration cost. The Planning Commission shall require independent verification of the adequacy of this amount from a professional engineer annually.
  - b. The Planning Commission shall annually review the amounts deposited for removal, site restoration, and administration costs are adequate for these purposes. If the Planning Commission determines that these amounts are not adequate, the Township shall require the owner/operator to make additional deposits to increase the amount of the surety bond to secure such inadequacy.
  - c. The County shall have access to the surety bond funds for the express purpose of completing decommissioning. If decommissioning is not completed by the applicant within one (1) year of the end of project life, inoperability of Commercial SES or facility abandonment, the surety bond funds may be used for administrative fees and costs associated with decommissioning.
  - d. The applicant will notify the Zoning Administrator no less than 14 days prior to any changes to the Surety Bond. Failure to supply such notification may result in termination of approval to operate by the Harrisville Township Board.
11. If the owner of the facility or the property owner fails to remove or repair the defective or abandoned Commercial Solar Energy System, the Township, in addition to any other remedy under this Ordinance, may pursue legal action to abate the violation by seeking to remove the Solar Energy System and recover any and all costs, including attorney fees.
12. Repowering: In addition to repairing or replacing solar energy components to maintain the system, a solar energy facility may at any time be repowered prior to abandonment, 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. 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.

**SECTION 4. VALIDITY AND SEVERABILITY.**

Should any portion of this Ordinance be found invalid for any reason, such holding shall not be construed as affecting 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 but only to the extent necessary to give this Ordinance full force and effect.

**SECTION 6. EFFECTIVE DATE.**

This Ordinance shall be published and take effect seven (7) days after publication as provided by law.

This Ordinance was adopted by the Township of Harrisville, County of Alcona, State of Michigan, at a meeting held on the 27<sup>th</sup> day of September, 2023, and ordered to be published in the manner prescribed by law.

I, Kaylie Landrum, Clerk of the Township of Harrisville, County of Alcona, State of Michigan, do hereby certify that the foregoing is a true copy of an ordinance adopted by the Township Board of the Township at a meeting held on the 27<sup>th</sup> day of September, 2023.

Kaylie Landrum  
Harrisville Township Clerk