

**TOWNSHIP OF COLUMBIA
ZONING ORDINANCE AMENDMENT
SOLAR ENERGY FACILITIES ORDINANCE NO. 100-01**

An ordinance to amend the Columbia Township Zoning Ordinance, being Ordinance No. 100, to provide regulation for the operation and maintenance of exempt solar panels and solar energy facilities in the Township.

THE TOWNSHIP OF COLUMBIA ORDAINS:

The following Sections of the Columbia Township Zoning Ordinance are hereby amended as follows:

Section 5.01 – PRINCIPAL USES PERMITTED. (AR)

J. Exempt Solar Energy (pursuant and subject to Section 12.18(A)).

Section 5.02 – SPECIAL LAND USES. (AR)

O. Solar Energy Facilities (pursuant and subject to Section 12.18(B)).

Section 6.01 – PRINCIPAL USES PERMITTED. (RM)

H. Exempt Solar Energy (pursuant and subject to Section 12.18(A)).

Section 7.01 – PRINCIPAL USES PERMITTED. (MHP)

G. Exempt Solar Energy (pursuant and subject to Section 12.18(A)).

Section 8.01 – PRINCIPAL USES PERMITTED. (C)

O. Exempt Solar Energy (pursuant and subject to Section 12.18(A)).

Section 9.01 – PRINCIPAL USES PERMITTED. (I)

J. Exempt Solar Energy (pursuant and subject to Section 12.18(A)).

Section 9.02 – SPECIAL LAND USES. (I)

H. Solar Energy Facilities (pursuant and subject to Section 12.18(B)).

Section 12.18 Solar Energy Systems of Article 12 of the Columbia Township Zoning Ordinance is hereby amended to provide as follows:

Section 12.18 – Solar Energy

A. **Exempt Solar Energy Systems.** Solar Energy Systems located on the premises of a farm, home, or business and which do not primarily involve the sale of electricity off the premises shall be exempt from the requirements of subsection "B". Such units shall be allowed as a permitted accessory use in all zoning districts, providing the electricity is primarily used on site for a farm, home, or business, and these Exempt Solar Energy Systems shall comply with all other restrictions and regulations for structures in the relevant district where they are located and shall be subject to the following requirements.

1. GENERAL REQUIREMENTS. All Exempt Solar Energy Systems, whether ground mounted or roof mounted, are subject to the following general requirements:
 - a. Exempt Solar Energy Systems must conform to all Township, County, State, and Federal laws, regulations, and ordinances as well as any applicable safety requirement and industry standards.
 - b. Exempt Solar Energy Systems shall be placed such that concentrated solar glare shall not be directed onto nearby properties or roadways.
2. ROOF MOUNTED EXEMPT SOLAR ENERGY SYSTEMS. Roof mounted Exempt Solar Energy Systems shall be subject to the following additional requirements:
 - a. Solar panels erected on a building shall not extend beyond the peak of the roof.
 - b. Roof mounted panels must be installed with a minimum of a three (3) foot setback from the edges of the roof, the peak, or eave or valley to maintain pathways of accessibility.
3. GROUND MOUNTED EXEMPT SOLAR ENERGY SYSTEMS. Ground mounted Exempt Solar Energy Systems (other than those defined below as Solar Energy Facilities) shall be subject to the following requirements:
 - a. Prior to the installation of a ground mounted Exempt Solar Energy System, the property owner shall submit a descriptive site drawing

to the Zoning Administrator. This drawing shall include setbacks, panel size, and the location of property lines, buildings, fences, greenbelts, and road right of ways. This site drawing must be drawn to scale.

- b. A ground mounted Exempt Solar Energy System shall not exceed the maximum building height for adjacent accessory buildings, but, in any case, the top of the system shall not be more that twenty-five (25) feet above the ground.
- c. A ground mounted or free-standing solar energy system shall not be installed in the front yard.
- d. All power transmission lines from a ground mounted solar energy system to any building or other structure shall be located underground.
- e. There shall be a greenbelt screening any ground mounted solar energy systems and equipment associated with the system from any adjacent residences. The greenbelt shall consist of shrubbery, trees, or other non-invasive plant species that provide a visual screen. In lieu of a planting greenbelt, a decorative fence may be used.
- f. In the event that a ground mounted Exempt Solar Energy System has been abandoned (meaning not having been in operation for a period of one (1) year), the system shall be removed by the property owner within six (6) months from the date of abandonment.

B. Solar Energy Facilities.

1. SPECIAL LAND USE REQUIREMENTS. The solar energy regulations and standards described in this section pertain to the creation of large-scale ground-mounted solar photovoltaic installations facilities that primarily sell electricity to be used off site. The regulations set forth below apply to the construction, operation, and/or repair of large-scale ground-mounted Solar Energy Facilities and shall only be allowed as a special land use in the AR Agricultural-Residential District and the I Industrial District, pursuant to Article 16 as to Special Land Use approvals and the following requirements:

- a. **Applicant Identification.** Applicant name and address in full, a statement that the applicant is the owner involved or is acting on the owner's behalf, the address of the property involved in the application (substitution may include a legal description or parcel identifications number(s)), and any additional contact information. Each application for a Solar Energy Facility shall also be dated to

indicate the date the application is submitted to Columbia Township;

- b. **Fee.** An applicant shall remit an application fee, an escrow deposit, in the amount specified by the Township Policy. This schedule shall be based on the cost of the application review and may be adjusted from time to time. If professional review of plans is required, then such costs shall be paid from the escrow deposit;
- c. **Project Description.** A general description of the proposed project including a legal description of the property or properties on which the project would be located and an anticipated construction schedule;
- d. **Project Design.** A description and drawing of the proposed technology to include type of solar panel and system, fixed mounted verses solar tracking, number of panels, and angles of orientation;
- e. **Procedure.** The Planning Commission review of a Special Land Use Permit application for a Solar Energy Facility is a two-step process. The first step is the public hearing and decision by the Planning Commission, per the procedures for review in Article 16. The second step, which may occur at a separate meeting for a solar energy system, is the site plan review process by the Planning Commission as described in Article 15. A decision on the Special Land Use Permit application by the Planning Commission is inclusive of all proposed Solar Energy Facilities, underground electrical lines, sub-station(s), junction boxes, laydown yard(s), and any operations/maintenance building(s);
- f. **Insurance.** Proof of the applicant's public liability insurance with at least \$3,000,000.00, per occurrence cover the Solar Energy Facility, the Township, and the landowner;
- g. **Certification.** Certifications that the applicant has complied or will comply with all applicable county, state, and federal laws, regulations, and ordinances, including compliance with the Farmland and Open Space Preservation Program (Part 361 of the Natural Resources and Environmental Protection Act, Public Act 451 of 1994 as amended, more commonly known as PA 116);
- h. **Manufacturers' Material Safety Data Sheet(s).** Documentation shall include the type and quantity of all materials used in the operation of all equipment;

- i. **Visual Simulations.** Photo exhibits visualizing the proposed solar energy system, with emphasis on visualizing the location of any required fences, landscaping, access roads, and setbacks from adjacent non-participating property;
 - j. **Maintenance Plan.** Applicant shall submit a maintenance plan that describes the following:
 - 1) Demonstrates the solar energy facility will be designed, constructed, and operated to minimize dust generation, including provision of sufficient watering of excavated or graded soil during construction to prevent excessive dust,
 - 2) States the manner unpaved access roads will be treated and maintained, either with a dust palliative or graveled or treated by another approved dust control method to prevent excessive dust, and
 - 3) Provisions that will be employed to maintain and promote native vegetation while minimizing the proliferation of weeds during and following construction;
 - k. **Emergency Services.** The large scale solar photovoltaic installation owner or operator shall provide a copy of the project summary, electrical schematic, and site plan to the local fire chief. The owner or operator shall cooperate with local emergency services in developing an emergency response plan. All means of shutting down the solar photovoltaic installation shall be clearly marked. The owner or operator shall identify a responsible person for public inquiries throughout the life of the installation;
 - l. **Decommissioning.** Copy of the decommissioning plans and a description of how any surety bond is applied to the decommissioning process; and
 - m. **Complaint Resolution.** Description of the complaint resolution process.
2. **ADDITIONAL SITE PLAN REQUIREMENTS.** The applicant shall submit a site plan in full compliance with Article 15 of this Ordinance for each Solar Energy Facility and other solar energy appurtenances. Additional requirements for a Solar Energy site plan are as follows:
- a. The project area boundaries,

- b. The location, height, and dimensions of all existing and proposed structures and fencing,
 - c. The location, grades, and dimensions of all temporary and permanent on-site and access roads from the nearest county or state maintained road,
 - d. Existing topography,
 - e. Water bodies, waterways, wetlands, drainage channels, and drain easements,
 - f. A site grading, erosion control and storm water drainage plan. At the Township's discretion, these plans may be reviewed by the Township's engineering firm,
 - g. All comments from the Tuscola County Drain Commissioner's office pertaining to the proposed solar energy facility shall be submitted to the Planning Commission,
 - h. All new infrastructure, both above and below ground, related to the project. This includes inverters and batteries, and
 - i. Identification of a construction/set-up area.
3. STANDARDS AND REQUIREMENTS. Solar Energy Facilities shall meet the following standards and requirements:
- a. **Location of Solar Energy Facilities.**
 - i. All Solar Energy Facilities must comply with the requirements established in the Columbia Township Zoning Ordinance.
 - ii. All fences and improved areas located on the site shall comply with the applicable setbacks for the district in which it is located, see Section 10.02 of the Zoning Ordinance. Furthermore, any structures or other improved areas located within the fenced/improved area shall be located at least 30 feet from the fence line/improved area.
 - iii. Solar panels and associated racking is limited in height to 18'. All other structures shall comply with the height requirements of Section 10.02.

b. Design and Installation Standards

- i. All proposed facilities shall comply with all applicable local, state, and federal standards and requirements, including electrical, building, and drain codes.
- ii. A copy of the application to the utility company that will be purchasing electricity from the proposed site shall be provided to the Planning Commission.
- iii. All electrical connection systems and lines from the Solar Energy Facility to the electrical grid connection shall be located and maintained at a minimum depth of six (6) feet underground.
- iv. The design and construction of Solar Energy Facilities shall not produce electrical emissions that would interfere with aircraft communications systems or navigation equipment.
- v. If the Solar Energy Facility consists of batteries or storage of batteries, adequate design must be provided to ensure all local, state and federal requirements regulating outdoor battery storage have been met.
- vi. The applicant must obtain a driveway permit from the Tuscola County Road Commission or MDOT, as applicable.
- vii. The applicant must obtain any drain permits from the Tuscola County Drain Commission or MDEQ, as applicable.
- viii. The design of Solar Energy Facilities buffers shall use materials, colors, textures, screening and landscaping, that will blend the facility into the natural setting and existing environment.
- ix. Lighting shall be consistent with local, state, and federal law, and shall be limited to that required for safety and operational purposes. Lighting shall be reasonably shielded from abutting properties.
- x. Compliance with any applicable airport overlay zoning requirements and the ability to comply with FAA regulations pertaining to hazards to air navigation must be demonstrated.
- xi. If a Solar Energy Facility ownership changes, the new owner/operator must meet with the Columbia Township

Planning Commission to review the conditions of the special use permit within sixty (60) days of the change in ownership.

- c. **Noise.** As part of the application, and prior to installation, the applicant shall provide noise modeling and analysis that will demonstrate the Solar Energy Facility will not exceed the maximum permitted noise levels. Noise generated by a Solar Energy Facility shall not exceed 55 dB(A) equivalent sound level (Leq) or the ambient Leq sound pressure level plus 5 dB(A) for more than 6 minutes in any hour (10% of any hour) beyond the property lines of the project. Modeling and analysis shall conform to any applicable national standards pertaining to noise and sound pressure measurements. After installation of the Solar Energy Facility, noise measurements shall be done by a third party, qualified professional according to the procedures in the most current version of the applicable national standards. All sound pressure levels shall be measured with a sound meter that meets or exceeds the most current version of ANSI S1.4 specifications for a Type II sound meter. Documentation of the noise measurements shall be provided to the Planning Commission within 120 days of the commercial operation of the project.

d. Light and Glare

- i. All Solar Energy Facilities shall be placed such that concentrated solar glare does not project onto nearby inhabited structures or roadways and be considered a nuisance.
- ii. The applicant has the burden of proof that any glare produced does not have an adverse effect on neighboring or adjacent uses through siting and mitigation. If the solar panel systems do produce a glare, the applicant shall be responsible for mitigation, and will provide a mitigation plan.
- iii. The design and construction of Solar Energy Facilities shall not produce light emissions, either direct or indirect (reflective), that would interfere with pilot vision and/ or traffic control operations.

e. Landscaping

- i. Applicant shall submit a landscape plan detailing all proposed changes to the landscape of the site, including temporary or permanent roads or driveways, grading, vegetation clearing, and planting.

- ii. All Solar Energy Facilities shall have a minimum landscape buffer depth of twenty (20) feet. The buffer shall contain evergreen trees or bushes planted no more than eight (8) feet apart and at least four (4) feet tall at time of planting. Trees and bushes planted in the buffer shall obtain a height of ten (10) feet within three growing seasons. The trees or bushes may be trimmed but can be no lower than a height of ten (10) feet.
- iii. Land clearing of natural vegetation shall be limited to that which is necessary for the construction, operation, and maintenance of the Solar Energy Facility per practices of best management of natural areas or good husbandry of the land or forest other prescribed by applicable laws, regulations, and bylaws.
- iv. Each owner/operator of a Solar Energy Facility shall utilize good husbandry techniques with respect to said vegetation, including but not limited to, proper pruning, proper fertilizer, and proper mulching, so that the vegetation will reach maturity as soon as practical and will have maximum density in foliage. Dead or diseased vegetation shall be removed and must be replanted at the next appropriate planting time. Plants or grasses not part of landscaping shall be maintained by the facility operator not to exceed twelve inches in height.
- v. Applicant must provide a detailed maintenance plan for the proposed solar energy system, and surrounding area, including provisions that will be employed to maintain and promote native vegetation while minimizing the proliferation of weeds during and following construction.

f. Security

- i. The manufacturers or installer's identification and appropriate warning sign shall be posted on or near the panels in a clearly visible manner; furthermore, an information sign shall be posted and maintained at the entrance(s), which shall list the name and phone number of the operator.
- ii. Solar energy facilities shall be surrounded by a chain link fence six (6) feet in height. The fence shall be designed to restrict unauthorized access.
- iii. No portion of the Solar Energy Facility shall contain or be used to display advertising. The manufacturers' name and

equipment information or dedication of ownership shall be allowed on any equipment of the solar energy system provided they comply with the prevailing sign regulation.

4. ABANDONMENT AND DECOMMISSIONING.

- a. Abandonment: A Solar Energy Facility that ceases to produce energy on a continuous basis for 12 months will be considered abandoned unless the current responsible party (or parties) with ownership interest in the Solar Energy Facility provides substantial evidence (updated every 6 months after 12 months of no energy production) to the Planning Commission or its designee of the intent to maintain and reinstate the operation of that facility. It is the responsibility of the responsible party (or parties) to remove all equipment and facilities and completely restore the property to its condition prior to development of the Solar Energy Facility.
 - i. Upon determination of abandonment, the Zoning Administrator shall notify the party (or parties) responsible that they must remove the Solar Energy Facility and restore the site to its condition prior to development of the Solar Energy Facility within six (6) months of notice by the Planning Commission or its designee.
 - ii. If the responsible party (or parties) fails to comply, the Township or its designee, may remove the Solar Energy Facility, sell any removed materials, and initiate judicial proceedings or take any other steps legally authorized against the responsible parties to recover the costs required to remove the Solar Energy Facility and restore the site to a nonhazardous predevelopment condition.
- b. Decommissioning: A decommissioning plan signed by the party responsible for decommissioning and the landowner addressing the following shall be submitted prior to the issuance of the zoning permit, which shall include:
 - i. The anticipated life of the project;
 - ii. The estimated decommissioning costs net of salvage value in current dollars;
 - iii. The method of ensuring that funds will be available for decommissioning and restoration, to include but not limited to:

1. Complete removal of all non-utility owned equipment, conduit, structures, fencing, roads, solar panels and foundations,
 2. Complete restoration of property to condition prior to development of the Solar Energy Facility,
 3. The anticipated manner in which the project will be decommissioned and the site Restored Decommissioning shall include the removal of each Photovoltaic Panel, all electrical components, and associated facilities within the footprint of the Solar Energy Facility to a depth of 6 feet below grade,
 4. All access roads to the Solar Energy Facility shall be removed, cleared, and graded by the facility owner, unless the property owner requests, in writing, a desire to maintain the access road. The Township will not be assumed to take ownership of any access road and such remaining roads will not be considered public roads, and
 5. The site and any disturbed earth shall be stabilized, graded, and cleared of any debris by the owner of the Solar Energy Facility or its assigns. If the site is not to be used for agricultural purposes following removal, the site shall be seeded to prevent soil erosion, and restored to its condition existing prior to any construction activities, unless the property owner's requests, in writing, the land surface areas not be restored;
- iv. A provision to give notice to the Township one year in advance of decommissioning. A surety bond to assure payment of the cost of decommissioning shall be required. To ensure proper removal of the structure when it ceases to be used for a period of one (1) year or more, any application for a new Solar Energy Facility shall include a description of the financial security guaranteeing removal of the Solar Energy Facility which will be posted prior to receiving a building permit for the facility. The security shall be a: 1) cash bond; 2) irrevocable bank letter of credit; or 3) performance bond in a form approved by the Township. The amount of such guarantee shall be no less than the estimated cost of removal and may include a provision for inflationary cost adjustments.

- v. 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.
- vi. The timeframe for completion of decommissioning activities.
- vii. A condition of the Surety Bond shall be notification by the surety company to the Township Zoning Administrator thirty (30) days prior to its expiration or termination.

5. COMPLAINT RESOLUTION.

- a. The Solar Energy Facility Applicant shall submit a detailed, written complaint resolution process developed by the Solar Energy Facility Applicant to resolve complaints from the Township Board or the Property owners or residents concerning the construction or operation of the Solar Energy Facility. The complaint resolution process must be approved by the Planning Commission as a condition of approval of the special land use permit application.
 - b. The Township Board shall appoint a three-member Complaint Resolution Committee to oversee and participate in all complaint resolution discussions or meetings between the Township property owner or resident and the Solar Energy Facility Applicant.
 - c. The Complaint Resolution Committee shall consist of the Zoning Administrator, one (1) member of the Township Planning Commission, and one (1) qualified elector chosen from the community.
 - d. The Solar Energy Facility Applicant shall provide not less than forty-eight (48) hour notice to the Complaint Resolution Committee and shall provide the opportunity for the Committee to attend any and all complaint resolution discussions and meetings.
 - e. The Township Board shall be kept apprised of all complaints and shall receive a report outlining the issues, the progress, and the resolution of each such complaint. Such report shall be presented monthly by the applicant to the Complaint Resolution Committee.
6. CONFLICTING PROVISIONS. In the event of a conflict between any provision in this section and any other section of this Zoning Ordinance

with regard to Solar Energy Facilities, the provisions of this section shall control.

Section 21.01 of Article 21, Definitions, of the Columbia Township Zoning Ordinance is hereby amended to add the following definitions:

DECOMMISSIONING PLAN. A document that details the planned shut down or removal of a Solar Energy Facility from operation or usage.

FENCE. A continuous barrier extending from the surface of the ground to a uniform height constructed of wood, stone, steel, or other metal, or any substance of a similar nature and strength.

IMPROVED AREA. Area containing solar panels, electrical inverters, and storage buildings.

PUBLIC ROAD. Any road or highway which is now or hereafter designated and maintained by the Tuscola County Road Commission and/or the Michigan Department of Transportation (MDOT), whether primary or secondary, hard surfaced or other dependable roads.

RESIDENCE. A building used as a dwelling for one or more families or persons.

SOLAR ENERGY FACILITY. An energy facility or an area of land principally used to convert solar energy to electricity, which includes, but is not limited to, the use of one or more solar energy systems. This definition shall only include those facilities that primarily sell electricity to be used off site.

The undersigned Supervisor and Clerk of the Township of Columbia hereby certify that this Zoning Ordinance Amendment was duly adopted by the Columbia Township Board on the 18th day of December, 2017 and was published in the Tuscola County Advertiser on the 23rd day of December, 2017. This Zoning Ordinance Amendment was made effective seven (7) days after said date of publication.

Kathy Trischler
Columbia Township Supervisor

Christine Kolar
Columbia Township Clerk