

**ORDINANCE NO. 43 - \_\_\_\_\_**

AN ORDINANCE TO AMEND THE ZONING ORDINANCE OF FREEDOM TOWNSHIP, WASHTENAW COUNTY, MICHIGAN.

Pursuant to the authority vested in it by the Michigan Zoning Enabling Act, Public Act 110 of 2006, as amended, Freedom Township, Washtenaw County, Michigan ordains the following amendments to articles 6.0 (General Provisions), 10.0 (Supplementary Development Provisions), and 19.0 (Definitions) of Zoning Ordinance No. 43 for the purpose of inserting new and updated provisions for solar energy facilities and devices, by authority of Public Act 110 of 2006, as amended.

**FREEDOM TOWNSHIP, WASHTENAW COUNTY, MICHIGAN, HEREBY ORDAINS:**

**PART A.**

[Article 6.0 (General Provisions) is hereby amended to delete Section 6.19 (Roof-Mounted Solar Energy Conversion Systems) in its entirety, as follows:]

**Section 6.19      Reserved-Roof-Mounted Solar Energy Conversion Systems.**

**PART B.**

[Article 10.0 (Supplementary Development Provisions) is hereby amended to add a new Section 10.05 entitled "Solar Energy Facilities and Devices" as follows:]

**Section 10.05      Solar Energy Facilities and Devices.**

The location, construction, operation, and maintenance of solar energy devices and facilities in the Township shall be subject to the following requirements:

**A.      Intent.**

The intent of this Section is to provide a means for allowing the construction, installation, and operation of solar energy devices and facilities, as defined in Section 19.03 (Definitions) in a manner that protects the public health, safety, and welfare; preserves the rural character of the Township, as expressed in the Master Plan; and minimizes adverse impacts to forestry and agricultural lands, and adjacent land uses.

**B.      Permitted Zoning Districts.**

Solar energy devices and facilities shall only be allowed in the zoning districts specified in the following table and shall be prohibited in all other districts. Solar energy devices and facilities shall be subject to review and approval in accordance with the following:

Type of Solar Energy Device or Facility Installation or Alteration on a Single Lot	Zoning District							
	A-R	R-2	R-6	LK	C-1	C-2	I-1	PSP
Attached Solar Energy Device	Z	Z	Z	Z	Z	Z	Z	Z
Small Freestanding Solar Energy Device	Z	Z	Z	Z	Z	Z	Z	Z
Commercial Solar Energy Generation Facility	C							

Type of Solar Energy Device or Facility Installation or Alteration on a Single Lot	Zoning District							
	A-R	R-2	R-6	LK	C-1	C-2	I-1	PSP
<b>Symbol</b>	<b>Approval Required</b>							
Z	Zoning Administrator Approval							
C	Conditional Use Permit Approval							
	Prohibited in this Zoning District							

1. **Zoning Administrator approval.** Solar energy devices as allowed in a zoning district shall be subject to review and approval of a certificate of zoning compliance in accordance with the applicable standards of this Section and Section 1.07 (Certificates of Zoning Compliance).
2. **Conditional use and site plan approval.** Commercial solar energy generation facilities as allowed in a zoning district shall be subject to review and approval in accordance with the requirements of this Section and articles 15.0 (Site Plan Review) and 16.0 (Conditional Uses). For facilities covering multiple parcels, each contiguous tract of land consisting of one (1) or more parcels not divided by a lake, river or road right-of-way shall be considered a separate site for purposes of application requirements.
3. **Planned Unit Development (PUD) District.** A solar energy device may be permitted as part of a Planned Unit Development (PUD) project, subject to the standards of this Section and Article 14.0 (Planned Unit Development District).
4. **Other permits and approvals.** Solar energy devices and facilities shall conform to all applicable federal, state, and local regulations, including compliance with the State Construction Code and applicable fire and electrical codes. Copies of all applicable outside agency permits and approvals shall be submitted to the Township prior to the start of construction.

**C. Required Application Information.**

The following information shall be required as part of any application for approval of a solar energy device or facility under this Section and Ordinance, in addition to the other applicable requirements of this Ordinance for the type of required review:

1. Specifications of the proposed technology, including types, heights, lengths, fixed-mounted verses solar-tracking, number of panels, and angles of orientation; and a copy of the manufacturer's instructions and design prints.
2. Detailed descriptions of site security measures and all proposed grading, filling, and tree or woodland clearing.
3. Detailed evaluation and analysis of potential light reflection, concentration, and glare impacts from the device or facility on adjacent land, structures, uses, road rights-of-way, navigable watercourses, and aeronautical operations and flight patterns in the area; and the short- and long-term effectiveness of any proposed impact mitigation measures.

4. A signed and notarized removal agreement for the future removal of the device or facility in accordance with the requirements of this Section.
5. Documentation of compliance with applicable requirements of this Section for the type of device or facility.

**D. General Standards for All Solar Energy Devices and Facilities.**

The following requirements shall apply to all solar energy devices and facilities:

1. The applicant(s), landowner(s), and all other responsible parties with ownership interest shall be jointly and severally responsible for constructing, maintaining, operating, and removing the solar energy device or facility in compliance with this Ordinance; and for correcting any conditions that violate this Ordinance.
2. The Township reserves the right to require submittal of evidence of ongoing operation of a device or facility at any time.
3. Solar energy devices and facilities shall:
  - a. Conform to the manufacturer's installation instructions and all applicable State Construction Code and Fire Code requirements.
  - b. Not cause a concentration of light or glare impacts on adjacent land, structures, uses, road rights-of-way, navigable watercourses or aeronautical operations and flight patterns.
  - c. Comply with all applicable Federal Communications Commission (FCC) guidelines, and shall not cause electromagnetic interference or stray voltage impacts.
  - d. Be designed and anchored to withstand anticipated lateral and uplifting wind loads and anticipated peak high winds during inclement weather.
4. On-site power lines between solar panels and inverters shall be placed underground. If the device or facility includes use of batteries for energy storage, documentation of compliance with all applicable battery storage rules and regulations shall be provided.
5. The manufacturers or installer's identification and appropriate weather-resistant warning signage and markings shall be posted on or near the panels in a clearly visible manner to provide emergency responders with appropriate warning and guidance with respect to isolating the solar electric system. Emergency contact information signage shall also be posted and maintained at each entrance.

**E. Additional Standards for Solar Energy Devices.**

The following additional standards shall apply to solar energy devices:

1. Attached solar energy devices installed parallel to and directly adjacent to the roofline or integrated into the roof structure shall not exceed the maximum height allowed for the type of building or structure in the zoning district.

2. Attached solar energy devices installed parallel to and directly adjacent to a wall of the structure or integrated into the wall structure shall not encroach into the required yard setbacks, and shall not extend beyond the top of the wall.
3. Small freestanding solar energy devices shall also conform to the requirements of Section 6.01 (Accessory Structures).

**F. Additional Standards for Commercial Solar Energy Generation Facilities.**

The following additional standards shall apply to all commercial solar energy generation facilities in the Township:

1. **Location limitations.** The following location limitations shall apply to commercial solar energy generation facilities:
  - a. **Minimum lot area.** The facility shall be limited to parcels with a minimum of 40 acres of gross lot area, except as follows:
    - (1) A parcel of land that will only be occupied by underground wiring associated with connecting commercial solar energy generation facilities on nearby parcels or connecting these facilities to an electrical substation.
    - (2) A parcel of land that is or will be occupied by an electrical substation and associated equipment needed to connect the facility into the electrical grid.
    - (3) A contiguous tract of land exceeding 320 acres in gross lot area may include one (1) or more individual parcels under 40.0 acres.
  - b. **Additional location factors for consideration.** The following additional location factors shall be considered by the Planning Commission as part of any conditional use permit application for a commercial solar energy generation facility:
    - (1) Avoid facility development on any parcel that provides an important scenic vista or that includes a prominent topographic change from the perspective of surrounding residences or road rights-of-way.
    - (2) Avoid facility development in a manner that includes the use of solar access easements that would restrict the location or height of adjacent structures and other improvements, or the presence or growth of any trees or other vegetation.
    - (3) Avoid facility development on prime farmland, as defined by the USDA Natural Resources Conservation Service.
    - (4) Avoid facility development in a manner that would adversely impact the rural agricultural economy or agricultural support businesses due to loss of active farming operations.

- (5) Avoid facility development on farmland where environmental or other conditions are likely to create state or federal regulatory conflicts that would preclude a return of the land to farming following removal of the facility.
2. **Dimensional standards.** The facility shall conform to the requirements of Article 3.0 (Dimensional Standards) for the zoning district, and the following:
  - a. A minimum required setback of 200 feet shall be provided between the facility and any road right-of-way or adjacent lot boundary.
  - b. A minimum required setback of 100 feet shall be required between the facility and any agricultural or residential buildings on the same lot.
  - c. Where a facility is proposed to be located on a tract of land that includes multiple contiguous parcels not under single ownership or control, the tract of land shall be treated as if it is a single lot for purposes of applying these setback requirements.
  - d. The maximum height of a commercial solar energy generation facility shall conform to the zoning district's maximum height standard unless the Planning Commission sets a more restrictive height standard as part of a conditional use permit approval.
3. **Required screening.** To ensure that the facility does not impair the visual character of the Township's rural environment or adversely impact adjacent uses or residents, adequate screening shall be provided in accordance with the following minimum requirements:
  - a. The screening shall be located within the facility's required perimeter setback area, unless the Planning Commission determines that an alternative location will provide for improved screening of the facility from adjacent lots and road rights-of-way.
  - b. At a minimum, the screening shall include a mix of evergreen and deciduous trees planted in staggered rows of sufficient width and density of plantings to provide immediately effective, year-round screening.
    - (1) Tree species and sizes shall conform to the requirements of Section 10.10 (Screening and Land Use Buffers), and shall be hardy, native to Michigan, suitable for soil conditions, and not attractive to deer. Use of arborvitae shall be prohibited.
    - (2) Existing vegetation and topography may be used to provide all or part of the required screening, subject to Planning Commission approval.
    - (3) The arrangement of tree plantings shall be consistent with protecting the network of underground agricultural drainage tiles.

- c. The required screening may also include supplemental berms, subject to the requirements of Section 10.10D.4. (Berm) and confirmation that the topographic changes will not impact surface water drainage patterns.
4. **Required perimeter fencing.** Commercial solar energy generation facilities shall be secured within a perimeter fence up to a maximum of seven feet in height and constructed of steel, aluminum or other materials of similar durability and strength as accepted by the Planning Commission, which shall be designed to restrict unauthorized access without fencing or otherwise impeding access to county drains and private drainage ditches.
5. **Protection of the drainage patterns, land, and soils.** The commercial solar energy generation facility shall be designed, constructed, and maintained in a manner that maximizes protection of the land and soils for future agricultural use, subject to the following requirements:
  - a. The network of underground agricultural drainage tiles shall be protected during facility construction and operation, and promptly repaired or replaced as necessary to maintain adequate drainage conditions on the lot and for surrounding land.
  - b. The networks of county drains and private drainage ditches shall be protected during facility construction and operation, including maintaining surfacewater drainage flows and unimpeded access for maintenance of all surfacewater drainage improvements.
  - c. The application of gravel or other paving beyond the minimum necessary ingress-egress to the site shall be prohibited.
  - d. Interim use of some or all of the land under the facility for agricultural purposes, such as raising of sheep, is encouraged.
  - e. At a minimum, a dense mix of groundcover plantings designed to attract a variety of pollinator species, including monarch butterflies, honey bees and other native pollinator insects, shall be required to be maintained on all areas of the lot encumbered by the facility that are not in agricultural use. The mix of pollinator plant species shall be suitable for the soil type, drainage, and growing zone.
  - f. The applicant(s), landowner(s), and all other responsible parties with ownership interest shall be jointly and severally responsible for demonstrating to the Planning Commission's satisfaction that conversion of agricultural land for use by a commercial solar energy generation facility will not create the conditions for or otherwise result in the establishment or resurgence of wetland areas that could preclude future resumption of farming activities.
  - g. A plan for eradication and control of invasive species [such as but not limited to Common (European) and Glossy Buckthorn (Rhamnaceae family), Autumn Olive (Elaeagnus umbellate), Russian Olive (Elaeagnus angustifolia), Honeysuckle (Lonicera tartarica), Multiflora Rose (Rosa

multiflora), Phragmites (Phragmites australis), and Purple Loosestrife (Lythrum salicaria)] shall be developed and implemented for the commercial solar energy generation facility site.

6. **Protection of other natural features.** Impacts from the establishment of a commercial solar energy generation facility on watercourses, wetlands, floodplains, steep slopes, groundwater recharge areas, and existing trees and woodlands on the lot shall conform to all applicable requirements of Section 10.04 (Natural Features Protection).
7. **Decommissioning plan.** Commercial solar energy generation facility projects shall include a decommissioning plan to ensure complete removal and site restoration upon the end of the project life or facility abandonment. The decommissioning plan shall include the following minimum provisions:
  - a. A detailed plan for removal of any foundation, including concrete footings, pilings, support structures, and other appurtenances to a depth of at least 48 inches below grade; removal of all non-utility owned equipment, conduit, structures, fencing, roads, and equipment; and restoration of the land to conditions suitable for agricultural use.
  - b. A detailed cost estimate of decommissioning, removal, and restoration costs prepared by a professional engineer, and identification of the financial resources to be used to accomplish decommissioning.
    - (1) This estimate shall be subject to Township Engineer review and Planning Commission acceptance.
    - (2) The estimate shall not incorporate any potential residual value of equipment or recyclable materials.
    - (3) The plan shall confirm that a performance guarantee for the accepted amount will be deposited with the Township per Section 1.11C (Performance Guarantee), which would allow the Township to fund the completion of this work if the owner fails to do so.
  - c. Provision for all decommissioning, removal, and restoration activities to be completed within a maximum of 180 calendar days after the end of project life or facility abandonment, unless the Planning Commission authorizes an alternative completion schedule.
  - ~~(1)~~d. The amount of the performance guarantee on deposit with the Township shall be re-evaluated in accordance with this Section and Ordinance at least once every five (5) years.
  - ~~(2)~~e. The applicant(s), landowner(s), and all other responsible parties with ownership interest shall be jointly and severally responsible for ensuring that the form and amount of the performance guarantee remain in compliance with the requirements of this Ordinance.
8. **Additional provisions.** The following additional provisions shall apply to all commercial solar energy generation facilities:

- a. An affidavit or evidence of an agreement between the landowner and applicant confirming permission to apply for facility approval and a copy of the application to or agreement with the utility company that will be purchasing electricity from the proposed site shall be provided with the application for conditional use permit approval.
  - b. Site grading for the facility shall be limited to the minimum necessary for ingress and egress of vehicles, to maintain surface water drainage and to provide for any required buildings or transformer pads. Removal or stockpiling of topsoil from the site shall be prohibited.
  - c. Commercial solar energy generation facilities shall conform to the requirements of the Airport Zoning Act (P.A. 23 of 1950, as amended), airport approach plan(s) adopted by the Michigan Aeronautics Commission, and applicable Federal Aviation Administration (FAA) regulations.
9. **Performance guarantee, insurance, and outside agency permits.** Following approval and prior to the start of facility construction, the landowner(s) or the responsible party with ownership interest shall:
- a. Deposit the required performance guarantee with the Township in the amount as accepted by the Planning Commission.
  - b. Submit copies of applicable permits and approvals required by all outside agencies with jurisdiction.
  - c. Submit a certificate of insurance to the Township with a minimum of \$1,000,000 liability coverage per occurrence and naming Freedom Township and its officials, employees, and agents as additional insured. An expired insurance certificate or an unacceptable liability coverage amount shall constitute grounds for revocation of any conditional use permit and removal of the facility.

**G. Inspection.**

The Township shall have the right upon issuing the required permits or approvals to inspect the premises on which the solar energy device or facility is located at all reasonable times for the purpose of verifying compliance with the requirements of this Section and Ordinance.

**H. Abandonment.**

Any solar energy device or facility that ceases to produce energy on a continuous basis for 365 calendar days shall be determined by the Zoning Administrator to be abandoned. Upon determination of abandonment, the Zoning Administrator shall provide the landowner(s) and the responsible party with ownership interest in the device or facility with written notice of the determination and an order to remove the device or facility per the requirements of Section 10.05I (Removal).



1. The order shall be rescinded upon receipt of written documentation from a landowner or responsible party demonstrating that the device or facility remains in operation to produce energy.
2. Upon acceptance of written documentation from a landowner or responsible party demonstrating that the device or facility will be returned to full operation within 180 calendar days, the Zoning Administrator shall place a corresponding hold on the order. Failure to return the device or facility to full operation within the designated timeframe shall constitute grounds for the Township to seek removal per the requirements of Section 10.05I (Removal).

**I. Removal.**

The landowner(s) or the responsible party with ownership interest shall remove a commercial solar energy generation facility for which a conditional use permit approval has been rescinded and any solar energy device or facility determined by the Township to be abandoned in accordance with the following requirements and procedures:

1. The device or facility shall be removed within 90 calendar days of receipt of a written removal order from the Zoning Administrator.
2. Failure by the owner to remove the device(s) as ordered or in accordance with an approved removal agreement shall be grounds for the Township to remove the device at the owner's expense, and to make use of any performance guarantee or other security provided for that purpose.
3. Removal of the device shall include removal of any foundation, including concrete footings, support structures or other appurtenances to a depth of 48 inches below grade, removal of all non-utility owned equipment, conduit, structures, fencing, roads, and equipment, and restoration of the land to its pre-development grade and condition.

**PART C.**

[Article 19.0 (Definitions), Section 19.03 (Definitions) is hereby amended to add new solar energy-related definitions, as follows:]

**Section 19.03 Definitions.**

Whenever used in this Ordinance, the following words and phrases shall have the meaning ascribed to them in this Section:

- 218a. **Solar energy generation.** The conversion of radiation from the Sun into electricity through the use of solar photovoltaic cells.
  - a. **Commercial solar energy generation facility.** A large freestanding array of photovoltaic cells and ancillary equipment and structural elements needed to capture and utilize the energy of the sun to generate electrical power, which is intended for use off-site or otherwise intended or used for the purpose of commercial power generation or the selling of energy to a public utility. Such facilities also include all associated land areas occupied or intended to be occupied by the array, electrical

inverters, storage buildings, access roads, screening, fencing, and all subsystems and transmission components.

- b. **Solar energy devices, attached.** An array of photovoltaic cells and ancillary equipment and structural elements needed to capture and utilize the energy of the sun to generate electrical power principally for on-site use on the premises associated with the device, which is secured to the exterior walls or roof of a principal building or accessory structure.
- c. **Solar energy devices, small freestanding.** An array of photovoltaic cells and ancillary equipment and structural elements of limited size and extent to capture and utilize the energy of the sun to generate electrical power principally for use on the premises associated with the device.

**PART D.**

All ordinances and amendments thereto that are in conflict with this Ordinance are hereby repealed.

**PART E.**

Adopted by the Township Board of Trustees for Freedom Township, Washtenaw County, Michigan, at a meeting of the Township Board held on the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_. This ordinance shall become effective on the eighth (8th) day following publication thereof.

Dated: \_\_\_\_\_, 20\_\_\_ \_\_\_\_\_  
Larry Lindemann, Supervisor

\_\_\_\_\_  
Valisa Bristle, Clerk

**CERTIFICATION**

The above Ordinance No. \_\_\_\_\_ was adopted at a meeting of the Freedom Township Board of Trustees on the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_; and published in the \_\_\_\_\_, a newspaper of general circulation in Freedom Township, Washtenaw County, Michigan on the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_.

\_\_\_\_\_  
Valisa Bristle, Clerk  
Freedom Township Clerk