

Vienna Township
Ordinance 1 of 2022
Solar Energy Systems

In order to promote the effective and efficient use of renewable Solar Energy Systems (SES), as defined herein, in areas with sufficient solar resources and existing infrastructure, to ensure their compatibility with adjacent land uses and future development, as outlined in the Township Master Plan and to protect the health, safety and welfare of Township residents, Vienna Township will regulate the siting, design, and installation of Solar Energy Systems. Solar Energy Systems are only permitted as authorized by this ordinance, which amends Section 3.2 Definitions to insert definitions in their proper alphabetical order, adds Principal-Use SES to Township sections 7, 8, 17 and 18 of the Agricultural District as a principal use subject to special approval, adds Section 7.16S Solar Energy Systems to Section 7.16 Site Development Standards and amends Section 9.3.1 Application for Permit to require a zoning permit for accessory Roof-Mounted and Ground-Mounted SES.

Vienna Township Hereby Ordains:

Section 1. Amendment of Article VIII Definitions Section 3.2 Definitions

Section 1. Amendment of Article VIII Definitions Section 3.2 Definitions is hereby amended to Insert the Following Definitions in Their Proper Alphabetical Order:

Accessory Ground-Mounted Solar Energy System: A ground-mounted solar energy system with the purpose primarily of generating electricity for the principal use on the site.

Building-Integrated Solar Energy System: A solar energy system that is an integral part of a primary or accessory building or structure (rather than a separate mechanical device), replacing or substituting for an architectural or structural component of the building or structure. Building-integrated systems include, but are not limited to, photovoltaic or hot water solar energy systems that are contained within roofing materials, windows, skylights, and awnings.

Dual Use: A solar energy system that employs one or more of the following land management and conservation practices throughout the project site:

A. Pollinator Habitat: Solar sites designed to meet a score of 76 or more on the Michigan Pollinator Habitat Planning Scorecard for Solar Sites.

B. Conservation Cover: Solar sites designed in consultation with conservation organizations that focus on restoring native plants, grasses, and prairie with the aim of protecting specific species (e.g., bird habitat) or providing specific ecosystem services (e.g., carbon sequestration, soil health).

C. Forage: Solar sites that incorporate rotational livestock grazing and forage production as part of an overall vegetative maintenance plan.

D. Agrivoltaics: Solar sites that combine raising crops for food, fiber, or fuel, and generating electricity within the project area to maximize land use.

Ground-Mounted Solar Energy System: A solar energy system mounted on support posts, like a rack or pole, that are attached to or rest on the ground.

Invasive Plant: Non-native (or alien) to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm or harm to human health.

Maximum Tilt: The maximum angle of a solar array (i.e., most vertical position) for capturing solar radiation as compared to the horizon line.

Minimum Tilt: The minimal angle of a solar array (i.e., most horizontal position) for capturing solar radiation as compared to the horizon line.

Non-Participating Lot(s): One or more lots for which there is not a signed lease or easement for development of a principal-use SES associated with the applicant project.

Participating Lot(s): One or more lots under a signed lease or easement for development of a principal-use SES associated with the applicant project.

Photovoltaic (PV) System: A semiconductor material that generates electricity from sunlight.

Principal-Use Solar Energy System: A commercial, ground-mounted solar energy system that converts sunlight into electricity for the primary purpose of off-site use through the electrical grid or export to the wholesale market.

Repowering: Reconfiguring, renovating, or replacing an SES to maintain or increase the power rating of the SES within the existing project footprint.

Roof-Mounted Solar Energy System: A solar energy system mounted on racking that is attached to or ballasted on the roof of a building or structure.

Solar Array: A photovoltaic panel, solar thermal collector, or collection of panels or collectors in a solar energy system that collects solar radiation.

Solar Carport: A solar energy system of any size that is installed on a structure that is accessory to a parking area, and which may include electric vehicle supply equipment or energy storage facilities. Solar panels affixed on the roof of an existing carport structure are considered a Roof-Mounted SES.

Solar Energy System (SES): A photovoltaic system or solar thermal system for generating and/or storing electricity or heat, including all above and below ground equipment or components required for the system to operate properly and to be secured to a roof surface or the ground. This includes any necessary operations and maintenance building(s), but does not include any temporary construction offices, substation(s) or other transmission facilities between the SES and the point of interconnection to the electric grid.

Solar Thermal System: A system of equipment that converts sunlight into heat.

Wildlife-Friendly Fencing: A fencing system with openings that allow wildlife to traverse over or through a fenced area.

Section 2. Amendment of Article V District Regulations, Section 5.1.2 Subsection (B) to Add Principal-Use Solar Energy Systems to Township Sections 7, 8, 17 and 18 of the Agricultural District as a Principal Use Subject to Special Approval

Article V District Regulations, Section 5.1.2, Subsection (B) is hereby amended to insert the following use in its proper numerical order:

28. Principal-Use Solar Energy Systems

Section 3. Amendment of Article VII General Provisions to add Section 7.16S Solar Energy Systems to Section 7.16 Site Development Standards

Article VII General Provisions of the Vienna Township Zoning Ordinance is hereby amended to add Section 7.16S Solar Energy Systems (SES) to read as follows:

S. Solar Energy Systems (SES)

1. Roof-Mounted SES, Accessory Ground-Mounted SES, and Building-Integrated SES shall be considered an accessory use to the principal use on the premises, if they meet the following requirements:

a. Roof-Mounted SES:

Height: Roof-Mounted SES shall not exceed 10 feet above the finished roof and are exempt from any rooftop equipment or mechanical system screening. The Roof-Mounted SES height is exempt from maximum building height requirements for all zoning districts.

Nonconformities: A Roof-Mounted SES or Building-Integrated SES installed on a nonconforming building, structure, or use shall not be considered an expansion of the nonconformity.

Application: All Roof-Mounted SES permit applications must include horizontal and vertical elevation drawings that show the location and height of the SES on the building and dimensions of the SES.

b. Accessory Ground-Mounted SES

Height: Ground-Mounted SES shall not exceed 25 feet in height.

Setbacks: A Ground-Mounted SES must meet the required setback for accessory buildings in the zoning district in which it is located. Setback distance is measured from the property line to the closest point of the SES at minimum tilt.

Lot Coverage: The area of the solar array shall not exceed 50% of the square footage of the primary building of the property unless it is sited over required parking (i.e. solar carport), in which case there is no maximum lot coverage for the Ground-Mounted SES. A Ground-Mounted SES shall not count towards the maximum number or square footage of accessory structures allowed on site or maximum Lot Coverage limits if the ground under the array is pervious.

Visibility (Residential): A Ground-Mounted SES in residential districts Rec-1, R-2 and R-3 shall be located in the side or rear yard to minimize visual impacts from the public right-of-way(s). Ground Mounted SES shall be reasonably screened from the view of the surrounding streets and roads to the maximum extent practicable by garden walls, fences, hedges, landscaping, earth berms, or other means, except to the extent that such screening is either impracticable or would result in ineffective solar access on the lot in question. Ground Mounted SES that are visible from a road or adjacent properties shall, to the maximum extent feasible, and without compromising the ability to effectively use solar collectors on the lot in question, use materials, textures, screening, and landscaping that will screen the Ground Mounted SES from view, and blend with the natural setting, existing environment, and neighborhood character. All Ground Mounted SES that rely on landscaping or a vegetative buffer for screening shall maintain a minimum opacity of at least eighty percent (80%), and a mature height of not less than the greater of (x) six (6) feet or (y) sixty percent (60%) of the height of the Ground Mounted Solar Energy System when oriented to maximum tilt.

i. Ground-Mounted SES may be placed in the front yard with administrative approval, where the applicant can demonstrate that placement of the SES in the rear or side yard will:

1. Decrease the efficiency of the SES due to topography, accessory structures, or vegetative shading from the subject lot or adjoining lots;
2. Interfere with septic system, accessory structures, or accessory uses; or
3. Require the SES to be placed on the waterfront side of the building housing the primary use.

Exemptions: A SES used to power a single device or specific piece of equipment such as a lawn ornament, lights, weather station, thermometer, clock, well pump or other similar singular device is exempt from Section 7.16 S(B) Accessory Ground-Mounted SES.

Nonconformities: A Ground-Mounted SES installed on a nonconforming lot or use shall not be considered an expansion of the nonconformity.

Application: All Ground- Mounted SES applications must include a site plan that shows the location of the system on the property, the primary structure, accessory structures, and setbacks to property lines and drawings that show height and tilt features (if applicable).

c. Building-Integrated SES

Building-Integrated SES are subject only to zoning regulations applicable to the structure or building and not subject to accessory ground or roof-mounted SES permits.

2. Principal-Use SES: a principal use subject to special approval in Vienna Township sections 7, 8, 17 and 18 of the Agricultural (A) zoning district, subject to Section 7.14 Uses Subject to Special Approval, and shall meet all the following requirements:

Height: Total height shall not exceed 25 feet measured from the ground to the top of the system when oriented at maximum tilt.

Setbacks: Setback distance shall be measured from the property line or road right-of-way to the closest point of the solar array at minimum tilt or any SES components and as follows:

- a. In accordance with the setbacks for principal buildings or structures for the zoning district of the project site.
- b. Three hundred (300) feet from any existing dwelling unit on a non-participating lot.
- c. A Ground-Mounted SES is not subject to property line setbacks for common property lines of two or more participating lots, except road right-of-way setbacks shall apply.

Fencing: A Principal-Use SES may be secured with perimeter fencing to restrict unauthorized access. If installed, perimeter fencing shall be a maximum of seven (7) feet in height. Barbed wire is prohibited. Fencing is not subject to setbacks, however fencing must not interfere with site-distance requirements at road and driveway intersections. Wildlife-friendly fencing, with openings to allow wildlife through, is preferred.

Screening: Planting of a landscape buffer, made up of trees and/or shrubs, or installation of a berm or wall, to block the site from view of neighboring property owners or adjacent roadway traffic shall be required. The landscape buffer, berm, or wall shall be tall enough to interrupt the line of sight between the proposed development and adjacent roadways, pedestrian routes, and buildings. In no case shall landscape buffer, berm, or wall be less than six (6) feet above the mean elevation of the center line of the public highway adjacent to the mining property, or six (6) feet above the general level of terrain along property lines.

- a. Any required screening and landscaping shall be placed outside the perimeter fencing and comply with site-distance requirements.
- b. Screening/landscaping detail shall be submitted as part of the landscape plan that identifies the type and extent of screening for a Principal-Use SES, which may include plantings, strategic use of berms, and/or fencing.
- c. The Planning Commission may reduce or waive screening requirements provided that any such adjustment is in keeping with the intent of the Ordinance and is appropriately documented (e.g. abutting participating lots; existing vegetation).
- d. Required screening shall not apply to sites bound by a Farmland Development Rights (PA 116) Agreement.

Ground Cover: A Principal-Use SES shall include the installation of perennial ground cover vegetation maintained for the duration of operation until the site is decommissioned. The applicant shall include a ground cover vegetation establishment and management plan as part of the site plan. Vegetation establishment should include invasive plant species control. Native plants are preferred.

- i. Sites bound by a Farmland Development Rights (PA 116) Agreement must follow the Michigan Department of Agriculture and Rural Development's Policy for Allowing Commercial Solar Panel Development on PA 116 Lands.
- ii. Ground cover at sites not enrolled in PA 116 must meet one or more of the four types of Dual Use defined in this ordinance.
 - a. Pollinator Habitat: Solar sites designed to meet a score of 76 or more on the Michigan Pollinator Habitat Planning Scorecard for Solar Sites.
 - b. Conservation Cover: Solar sites designed in consultation with conservation organizations that focus on restoring native plants, grasses, and prairie with the aim of protecting specific species (e.g., bird habitat) or providing specific ecosystem services (e.g., carbon sequestration, soil health).
 - c. Forage: Solar sites that incorporate rotational livestock grazing and forage production as part of an overall vegetative maintenance plan.
 - d. Agrivoltaics: Solar sites that combine raising crops for food, fiber, or fuel, and generating electricity within the project area to maximize land use.
- iii. Project sites that are included in a brownfield plan adopted under the Brownfield Redevelopment Financing Act, PA 381 of 1996, as amended, that contain impervious surface at the time of construction or soils that cannot be disturbed, are exempt from ground cover requirements.

Lot Coverage: A Principal-Use SES shall not count towards the maximum lot coverage or impervious surface standards for the district.

Land Clearing: Land disturbance or clearing shall be limited to what is minimally necessary for the installation and operation of the system and to ensure sufficient all-season access to the solar resource given the topography of the land. Topsoil distributed during site preparation (grading) on the property shall be retained on site.

Access Drives: New access drives within the SES shall be designed to minimize the extent of soil disturbance and erosion on the premises. The use of geotextile fabrics and gravel placed on the surface of the existing soil for temporary roadways during the construction of the SES is permitted, provided that the geotextile fabrics and gravel are removed once the SES is in operation. New access drives shall comply with Section 7.24 Access Management of the Ordinance.

Wiring: SES wiring (including communication lines) may be buried underground. Any above-ground wiring within the footprint of the SES shall not exceed the height of the solar array at maximum tilt.

Lighting: Lighting shall be limited to inverter and/or substation locations only. Light fixtures shall have downlit shielding and be placed to keep light on-site and glare away from adjacent properties, bodies of water, and adjacent roadways. Flashing or intermittent lights are prohibited.

Signage: No signs other than signs required pursuant to federal, state or local law or ordinance shall be allowed on Principal-Use SES or the property on which it is located.

Sound: The sound pressure level of a Principal-Use SES and all ancillary solar equipment shall not exceed 40 dBA at the property line of an adjoining non-participating lot. The site plan shall include modeled sound isolines extending from the sound source to the property lines to demonstrate compliance with this standard.

Repowering: In addition to repairing or replacing SES components to maintain the system, a Principal-Use SES may at any time be repowered by reconfiguring, renovating, or replacing the SES to increase the power rating within the existing project footprint.

- i. A proposal to change the project footprint of an existing SES shall be considered a new application, subject to the ordinance standards at the time of the request.
- ii. A proposal to increase the size of a transformer or a substation within an existing SES project footprint shall require administrative approval from the Zoning Administrator.

Removal of Abandoned Principal-Use SES: A decommissioning plan shall be submitted as part of the site plan application for a Principal-Use SES. The decommissioning plan shall include:

- i. The anticipated manner in which the project will be decommissioned, including a description of which above-grade and below-grade improvements will be removed, retained (e.g. access drive, fencing), or restored for viable reuse of the property consistent with the zoning district,
 - ii. The projected decommissioning costs for removal of the SES (net of salvage value in current dollars) and soil stabilization, less the amount of the surety bond posted with the State of Michigan for decommissioning of panels installed on PA 116 lands,
 - iii. The method of ensuring that funds will be available for site decommissioning and stabilization (in the form of surety bond, irrevocable letter of credit, or cash deposit), and
- b. A review of the amount of the performance guarantee based on inflation, salvage value, and current removal costs shall be completed every five (5) years, for the life of the project, and approved by the Township board. An SES owner may at any time:
- i. Proceed with the decommissioning plan approved by the Planning Commission and remove the system as indicated in the most recent approved plan; or
 - ii. Amend the decommissioning plan with Planning Commission approval and proceed according to the revised plan.
- c. Decommissioning an SES must be started when the soil is dry to prevent soil compaction and must be complete within six (6) months after abandonment. An SES that has not produced electrical energy for twelve (12) consecutive months or more, or for eighteen (18) non-consecutive months during any three (3) year period, shall prompt an abandonment hearing.

Section 4. Amendment of Section 9.3.1 of Article IX Administration to Require a Permit for Roof-Mounted and Ground-Mounted SES

Article IX Administration Section 9.3.1 of the Vienna Township Zoning Ordinance is hereby amended to read as follows:

Section 9.3.1 Application for Permit

Before proceeding with the erection, enlargement, conversion of any building or structure subject to the provisions of this Ordinance, the owner of the premises or his agent shall first apply for a zoning permit from the Zoning Administrator. This requirement shall not apply if no change is made in existing foundations; except that a zoning

permit shall be required for accessory Roof-Mounted and Ground-Mounted SES. Application shall be made in triplicate upon forms provided by this office, and shall be accompanied by the tax description of the premises, by evidence of ownership of all property to be covered by the zoning permit, and by a blueprint, or neat pen and ink drawn in triplicate to approximate scale showing the following, or a site plan prepared according to Section 7.15, if required.

Section 5. Severability.

If any section, clause, or provision of this Ordinance be declared unconstitutional or otherwise invalid by a court of competent jurisdiction, said declaration shall not affect the remainder of the Ordinance. The Township Board hereby declares that it would have passed each part, section, subsection, phrase, sentence, and clause irrespective of the fact that any one or more parts, sections, subsections, phrases, sentences, or clauses be declared invalid.

Section 6. Conflicts.

If any provision of the Vienna Township Zoning Ordinance conflicts with this Zoning Ordinance Amendment, then the provisions of this Zoning Ordinance Amendment shall control.

Section 7. Effective Date.

This Ordinance shall become effective eight (8) days after being published in a newspaper of general circulation within the Township.

Township of Vienna

By: _____

By: _____

Cheryl Klein, Supervisor

Elaine Dixon, Clerk

Adoption date: _____

Effective date: _____