

**This amendment to Section 8 of the West Lakeland Township Ordinances adds standards and definitions for solar energy systems, solar energy farms and for their installation and use in West Lakeland Township.**

**8.17 Performance Standards for Solar Energy Systems**

**8.17.1 Purpose and Intent.** West Lakeland Township finds that it is in the public interest to encourage the use and development of renewable energy systems (including solar energy systems) that have a positive impact on energy conservation with limited adverse impact on nearby properties. As such, the Township supports the use of solar collection systems and the development of solar energy farms. West Lakeland Township also finds that the development of solar energy farms should be balanced with the protection of the public health, safety and welfare. The Township intends the following standards to ensure that solar energy farms can be constructed within West Lakeland Township while also protecting public safety and the natural resources of the Township. Consistent with the West Lakeland Township Comprehensive Plan, it is the intent of the Township with this Section to create standards for the reasonable capture and use, by households, businesses and property owners, of their solar energy resource and encourage the development and use of solar energy

**8.17.2 Applicability.** These regulations are for all solar energy systems and solar energy farms on properties and structures under the jurisdiction of the West Lakeland Township Zoning ordinance except that West Lakeland Township requires the owner or operator of solar farms that would generate more than 50 megawatts of power to get approval for such a system from the Minnesota Public Utilities Commission (PUC).

**8.17.3 Definitions.** The following words, terms and phrases, when used in this Article and Section, shall have the meaning provided herein, except where the context clearly indicates otherwise:

**Building-Integrated Solar System.** An active solar system that is an integral part of a principal or accessory building, rather than a separate mechanical device, replacing or substituting for an architectural or structural component of the building. Building-integrated systems include, but are not limited to, photovoltaic or thermal solar systems that are contained within roofing materials, windows, skylights and awnings.

**Community Solar Energy System (Solar Garden):** A solar-electric (photovoltaic) array that provides retail electric power (or a financial proxy for retail power) to multiple community members or businesses residing or located off-site from the location of the solar energy system.

**Ground Mounted Panels.** Solar panels mounted to the ground by use of stabilizers or similar apparatus.

**Photovoltaic System.** An active solar energy system that converts solar energy directly into electricity.

**Roof or Building Mounted SES.** Solar energy system (panels) that are mounted to the roof or building using brackets, stands or other apparatus.

**Solar Access.** A view of the sun, from any point on the solar collector surface that is not obscured by any vegetation, building, or object located on parcels of land other than the parcel upon which the solar collector is located, between the hours of 9:00 AM and 3:00 PM Standard time on any day of the year.

**Solar Collector.** A device, structure or a part of a device or structure that the primary purpose is to transform solar radiant energy into thermal, mechanical, chemical or electrical energy.

**Solar Energy.** Radiant energy received from the sun that can be collected in the form of heat or light by a solar collector.

**Solar Energy System (SES).** An active solar energy system that collects and/or stores solar energy and transforms solar energy into another form of energy or transfers heat from a collector to another medium using mechanical, electrical, thermal or chemical means.

**Solar Farm.** A commercial facility that converts sunlight into electricity, whether by photovoltaic (PV), concentrating solar thermal devices (CST), or other conversion technology, for the primary purpose of selling generated electricity. A solar farm is the primary land use for the parcel on which it is located.

**Solar Hot Water System.** A system that includes a solar collector and a heat exchanger that heats or preheats water for building heating systems or other hot water needs, including residential domestic hot water and hot water for commercial processes.

#### **8.17.4 Types of Solar Energy Systems.**

**8.17.4.1 Rooftop solar energy systems:** accessory to the primary land use, designed to supply energy for the primary use.

**8.17.4.1.1** These systems are permitted accessory uses in all districts in which buildings are permitted.

**8.17.4.1.2** No Township conditional use permit is required.



- 8.17.4.3.5** An interconnection agreement must be completed with the electric utility in whose service territory the system is located.
- 8.17.4.3.6** All structures must meet the setback, height and coverage limitations for the district in which the system is located.
- 8.17.4.3.7** Ground-mount systems must meet all required standards for structures in the district in which the system is located.
- 8.17.4.3.8** Site Plan Required. The owner or operator shall submit to the Township a detailed site plan for both existing and proposed conditions. These plans shall show the location of all areas where solar arrays would be placed, the existing and proposed structures, property lines, access points, fencing, landscaping, surface water drainage patterns, floodplains, wetlands, the ordinary high water mark for all water bodies, any other protected resources, topography, electric equipment and all other characteristics requested by the Township.
- 8.17.4.3.9** Power and communication lines. Power and communication lines running between banks of solar collectors and to electric substations or interconnections with buildings shall be buried underground. The Township Board or their designee may grant exemptions to this requirement in instances where shallow bedrock, water courses or other elements of the natural landscape interfere with the ability to bury lines.
- 8.17.4.3.10** Aviation Protection. For solar gardens located within 500 feet of an airport or within the A or B safety zones of an airport, the applicant must complete and provide the results of the Solar Glare Hazard Analysis Tool (SGHAT) for the Airport Traffic Control Tower cab and final approach paths, consistent with the Interim Policy, FAA Review of Solar Energy Projects on Federally Obligated Airports, or most recent version adopted by the FAA.
- 8.17.4.3.11** Decommissioning Plan. The Township requires the owner or operator to submit a decommissioning plan for ground-mounted systems to ensure that the owner or operator properly removes the equipment and facilities upon the end of project life or after their useful life. The owner or operator shall decommission the solar panels in the event they are not in use for twelve (12) consecutive months. The plan shall include provisions for the removal of all structures and foundations, the removal of all electrical transmission components, the restoration of soil and vegetation and a soundly-based plan ensuring financial resources will be available to fully decommission the site. The disposal of structures and/or foundations shall meet all Township requirements and the requirements of the Washington County Solid Waste Ordinance. The Township also may require the owner or operator to post a

bond, letter of credit or establish an escrow account to ensure property decommissioning.

- 8.17.4.4 Solar farms:** Ground-mount solar energy arrays that are the primary use on the lot or of a property, designed for providing energy to off-site uses or export to the wholesale market. Solar farms require conditional use permits. These types of systems that are not permitted or regulated by the State of Minnesota Public Utilities Commission (PUC) shall be subject to the following conditions.
- 8.17.4.4.1** Solar farms are a permitted use in the Neighborhood Commercial/Business (NC-B) and Highway Commercial/Business (HC-B) zoning districts.
  - 8.17.4.4.2** Stormwater management and erosion and sediment control shall meet the requirements of the Township and MPCA best management practices.
  - 8.17.4.4.3** Prohibitions: The Township prohibits community solar farms within: *Shoreland Management District and Lower St. Croix River Bluffland Management District as designated by the Department of Natural resources (DNR) and the Washington County Zoning Ordinance; Wetlands to the extent required by the Minnesota Wetland Conservation Act; All Floodplain Districts.*
  - 8.17.4.4.4** Foundations. The manufacturer's engineer or another qualified engineer shall certify that the foundation and design of the solar panels meets the accepted professional standards, given local soil and climate conditions.
  - 8.17.4.4.5** Other standards and codes. All solar farms shall meet all applicable local, state and federal regulatory standards, including but not by way of limitation the State of Minnesota Uniform Building Code, as amended; and the National Electric Code, as amended.
  - 8.17.4.4.6** Power and communication lines. Power and communication lines running between banks of solar panels and to electric substations or interconnections with buildings shall be buried underground. The Township Board or their designee may grant exemptions to this requirement in instances where shallow bedrock, water courses or other elements of the natural landscape interfere with the ability to bury lines.
  - 8.17.4.4.7** Interconnection. The owner or operator of the solar farm must complete an interconnection agreement with the electric utility in whose service territory the system is located.
  - 8.17.4.4.8** Site Plan Required. The owner or operator of the solar farm must submit to the Township a detailed site plan for both existing and proposed conditions. These plans shall show the location of all areas where solar arrays would be placed, the existing and

proposed structures, property lines, access points to the site, fencing, landscaping, surface water drainage patterns, floodplains, wetlands, the ordinary high water mark for all water bodies, any other protected resources, topography, electric equipment and all other characteristics requested by the Township.

- 8.17.4.4.9** The Township allows the installation of small operations, security and equipment buildings on the site of solar farms as permitted accessory uses to the solar farm.
- 8.17.4.4.10** The owner or operator shall contain all unenclosed electrical conductors located above ground within structures that control access or they must be protected from entry by a six-foot-tall fence. All electrical connections to the utility system must meet or exceed the National Electrical Safety Code.
- 8.17.4.4.11** Aviation Protection. For solar farms located within 500 feet of an airport or within the A or B safety zones of an airport, the applicant must complete and provide the results of the Solar Glare Hazard Analysis Tool (SGHAT) for the Airport Traffic Control Tower cab and final approach paths, consistent with the Interim Policy, FAA Review of Solar Energy Projects on Federally Obligated Airports, or most recent version adopted by the FAA.
- 8.17.4.4.12** Solar farms that have panels that would cover more than 20 acres of land must meet the review and design standards of the Public Utilities Commission (PUC) for Solar Farms.
- 8.17.4.4.13** Decommissioning Plan. The Township requires the owner or operator to submit a decommissioning plan for ground-mounted systems to ensure that the owner or operator properly removes the equipment and facilities upon the end of project life or after their useful life. The owner or operator shall decommission the solar panels in the event they are not in use for twelve (12) consecutive months. The plan shall include provisions for the removal of all structures and foundations, the removal of all electrical transmission components, the restoration of soil and vegetation and a soundly-based plan ensuring financial resources will be available to fully decommission the site. The disposal of structures and/or foundations shall meet all Township requirements and the requirements of the Washington County Solid Waste Ordinance. The Township also may require the owner or operator to post a bond, letter of credit or establish and escrow account to ensure property decommissioning.

**8.17.5 Additional Standards.** In addition to the standards allowed above, all solar energy systems shall meet the following standards.

- 8.17.5.1** The owners or operators of electric solar energy systems that are connected to the electric distribution or transmission system, either directly or through the existing service of the primary use on the site, shall obtain an interconnection agreement with the electric utility in whose service territory the system is located. Off-grid systems are exempt from this requirement.
- 8.17.5.2** Electric solar system components that are connected to a building electric system must have an Underwriters Laboratory (UL) listing.
- 8.17.5.3** All solar energy systems shall meet the standards of the Minnesota and National Electric Code.
- 8.17.5.4** All rooftop solar systems shall meet the standards of the Minnesota Building Code.
- 8.17.5.5** All solar energy systems using a reflector to enhance solar production shall minimize glare from the reflector that affects adjacent or nearby properties. Steps to minimize glare nuisance may include selective placement of the system, screening of the solar array, reducing use of the reflector system or other remedies that limit glare.
- 8.17.5.6** Building- or roof- mounted solar systems shall not exceed the maximum allowed height in any zoning district. For purposes of height measurement, solar systems other than building-integrated systems shall be considered to be mechanical devices and are restricted consistent with other building mounted mechanical devices for the zoning district in which the system is being installed, except that solar energy systems shall not be required to be screened.
- 8.17.5.7** Commercial rooftop systems shall be placed to limit visibility from the public right-of-way or to blend into the roof design, provided that minimizing visibility still allows the property owner to reasonably capture solar energy.
- 8.17.5.8** Setbacks. All equipment and structures shall meet the setback and coverage limitations for the zoning district in which the system is located.
- 8.17.5.9** Aesthetic Conditions. The solar energy system must be designed to blend into the architecture of the building or be screened from routine view from public right-of-ways to the maximum extent possible while still allowing the system to achieve efficient performance.