

# SOLAR ENERGY SYSTEMS

ORDINANCE No. #2 -- 2012

## AN ORDINANCE TO PERMIT AND REGULATE SOLAR ENERGY SYSTEMS AS A PERMISSIBLE ACCESSORY USE IN ALL ZONING DISTRICTS AND SOLAR ENERGY FACILITIES AS A PRINCIPAL USE IN THE INDUSTRIAL DISTRICT WITHIN WARWICK TOWNSHIP, CHESTER COUNTY

IT IS HEREBY ENACTED AND ORDAINED by the Board of Supervisors of Warwick Township, Chester County, Pennsylvania, that the following provisions of the Warwick Township Zoning Ordinance, as amended, shall be further amended as follows:

**SECTION 1.** Article 2, Definitions, of the Zoning Ordinance shall be amended to add the following definitions:

Solar Energy. Radiant energy (direct, diffused or reflected) received from the sun.

Solar Energy System. An energy system, mounted on a building or on the ground, whose primary purpose is to provide for the collection, storage and distribution of solar energy for heating or cooling, for water heating or for electricity to meet all or part of a structure's energy requirements.

Solar Collector. A device or combination of devices that transforms direct solar energy into thermal, chemical or electrical energy and contributes significantly to a structure's energy supply.

Solar Panel. A structure containing one or more receptive cells, the purpose of which is to convert solar energy into usable electrical energy, heat water or produce hot air or perform any other similar function by way of a solar energy system.

Solar Energy Facility. An electric generating facility, designed to be a principal use, whose main purpose is to generate and supply electricity, and consisting of one or more Solar Energy Systems and other accessory structures and buildings, including substations, electrical infrastructure, transmission lines and other appurtenant structures and facilities.

Solar System Owner . The person or entity having an equity interest in the Solar Energy System or Solar Energy Facility.

**SECTION 2.** Article 13, I-Industrial Zoning District, § 1301.C, Uses Permitted as Conditional Uses, shall be amended to add new subsection 8 as follows:

8. Solar Energy Facilities, in accordance with the provisions of §1927 of the Zoning Ordinance.

**SECTION 3.** Article 19, General Provisions, shall be amended to add new §1927, Solar Energy Systems and Facilities, as follows:

Section 1927. SOLAR ENERGY SYSTEMS AND FACILITIES

- A. Purpose. The purpose of this Section is to define Solar Energy Systems as an inherently beneficial use of residential and commercial properties. Solar Energy Systems preserve the municipality's public health, safety and welfare by reducing the carbon footprint of each property by creating a clean, renewable energy source. Solar Energy Systems provide the property owner the choice for electric supply, reduce the peak power demand of the utility grid and enhance the municipality's electric power reliability and quality. Nevertheless, these regulations also seek to minimize any negative impacts on residents or properties throughout the Township, including matters of public safety, glare, and stormwater. This Section will regulate the use of solar panels so as to promote their compatibility with existing land uses as specified the Warwick Township Zoning Ordinance.
- B. Solar Energy Systems permitted as accessory use.
  1. A Solar Energy System shall be permitted in all zoning districts as an accessory use provided it satisfies the requirements set forth in this subsection. A Solar Energy System shall be permitted as accessory to a historic resource and within Historic Districts, provided the system is consistent with the purposes and intent of Article 24 of the Township Zoning Ordinance regarding the protection of historical, architectural, and archaeological resources.
  2. A Solar Energy System shall provide power for the principal use or an accessory use on a property on which the Solar Energy System is located and shall not be used for the generation of power for the sale of energy to other users, although this provision shall not be interpreted to prohibit the sale of excess power generated to the local utility company or the receipt of credits therefor from such utility company, nor shall it be interpreted to prohibit the sale of solar renewable energy credits to any other utility company(ies)

who purchase same to satisfy their required share of solar energy production.

3. An Applicant who proposes to install a Solar Energy System connected to the utility grid shall provide written authorization from the local utility company acknowledging and approving such connection.
4. A solar energy system may be roof-mounted or ground-mounted.
5. Additional standards for roof-mounted Solar Energy Systems
  - a. A roof-mounted system may be mounted on a principal building or accessory building. A roof-mounted system, whether mounted on the principal building or accessory building, may not exceed the maximum building height or accessory building height specified for the building type in the underlying zoning district.
  - b. In no instance shall any part of the roof-mounted system extend beyond the edge of the roof.
  - c. A roof-mounted system attached to an accessory building shall not be permitted in a front yard and shall comply with § 1908 of the Zoning Ordinance.
  - d. The Applicant shall provide evidence in the form of a plan certified by a Pennsylvania Commonwealth-licensed professional engineer that the roof is capable of holding the weight of the roof-mounted system.
6. Additional standards for ground-mounted Solar Energy Systems
  - a. A ground-mounted system shall not exceed 15 feet in height.
  - b. The surface area of a ground-mounted system, regardless of the mounted angle, shall be included as part of the overall lot area.
    1. For all uses except agricultural in the RA, R1, R2, R3, Village Hamlet Development Overlay, Saint

Peters Historic Heritage Overlay, PRD, B1, and B2 districts, the maximum allowable surface area of a ground-mounted system shall be one percent (1%) of the lot area but not to exceed 360 square feet.

2. For agricultural uses and all uses in the INS and IND districts, the maximum allowable surface area of a ground-mounted system shall be one percent (1%) of the lot area, but not to exceed 1,000 square feet.
  3. The surface area of the ground-mounted system shall be considered impervious, regardless of the mounted angle of the solar panels.
- c. A ground-mounted system shall not be permitted in a front yard and shall comply with § 1908 of the Zoning Ordinance.
  - d. For any ground-mounted system less than 360 square feet, the minimum yard setbacks from side and rear property lines shall be equivalent to the accessory structure setbacks of the applicable zoning district but shall not be less than 15 feet. Any ground-mounted system equal to or greater than 360 square feet shall comply with the principal building setback requirements of the applicable zoning district and shall be screened with buffer plantings as specified in the Subdivision and Land Development Ordinance.
  - e. Any ground-mounted system shall be screened from any adjacent property that is residentially zoned or used for residential purposes. The screen may consist of plantings, decorative fencing, or a combination of both, and shall effectively mitigate negative offsite visual impacts and glare.
  - f. All power transmission lines from a ground-mounted system to any building or other structure shall be located underground.

- g. If a ground-mounted system is removed, any earth disturbance as a result of the removal shall be graded and reseeded to the satisfaction of the Township.
  - h. Ground-mounted systems shall be permitted as accessory to uses permitted in the open space, subject to compliance with the all applicable open space regulations of the Township Zoning Ordinance.
- 7. No adjacent property owner shall be required to remove or cut any plant, bush, crop or tree in order to eliminate or reduce obstructions of sunlight to solar energy systems.
- 8. Solar panels shall be placed such that concentrated solar radiation or glare shall not be directed onto nearby properties or roadways. Solar panels shall have an anti-reflection coating or other treatment to minimize glare impacts.
- 9. The design of the Solar Energy System shall conform to the applicable industry standards. A building permit shall be obtained for a Solar Energy System per the PA Uniform construction Code (UCC). All wiring shall comply with the applicable version of the National Electric Code (NEC). The local utility provider shall be contacted by the Solar System Owner to determine grid interconnection and new metering policies. The Applicant shall submit certificates of design compliance obtained by the equipment manufacturers from a certifying organization and any such design shall be certified by an engineer licensed in the Commonwealth of Pennsylvania.
- 10. The Solar Energy System shall comply with all applicable Township Ordinances and Codes so as to ensure the structural integrity of such system.
- 11. Before any construction can commence on any Solar Energy System, the property owner must provide a written affidavit that he/she is the responsible party for owning and maintaining the Solar Energy System. If the Solar Energy System is abandoned or is in a state of disrepair, it shall be the responsibility of the property owner to remove or rehabilitate the Solar Energy System.

12. In addition to the provisions set forth herein, any other View Shed requirements set forth in the Township Zoning Ordinance shall also apply.

C. Solar Energy Facilities permitted as a principal use.

1. Solar Energy Facilities, including associated buildings and electrical infrastructure, are permitted in the I-Industrial Zoning District when approved as a conditional use by the Board of Supervisors in accordance with the terms of this section.
2. Solar Energy Facilities shall comply with the setback, height and coverage requirements of the underlying zoning district in which the facility is located.
3. The following shall be included in any application for conditional use approval for a Solar Energy Facility:
  - a. A narrative describing the proposed Solar Energy Facility, including an overview of the project; the project location; the approximate generating capacity of the Solar Energy Facility; the approximate number, representative types and height or range of heights of the panels or other solar energy equipment to be constructed, including their generating capacity, dimensions and respective manufacturers; and a description of all ancillary facilities.
  - b. A lease or similar evidence of a written agreement between the Property Owner and the Facility Owner, demonstrating that the Facility Owner has permission of the Property Owner to apply for necessary permits or approvals for construction and operation of the Solar Energy Facility.
  - c. Evidence that written notice has been provided to the local electrical distribution utility company notifying them of the applicant's intent to build an interconnected customer-owned Solar Energy Facility.
  - d. Identification of the properties, or portions thereof, on which the proposed Solar Energy Facility will be located and the adjacent properties.

- e. A site plan showing the planned location of each Solar Energy Facility property lines, setbacks, access roads and turnout location, substation(s), electrical cabling from the Solar Energy System to the substation(s), ancillary equipment, buildings and structures including associated distribution and/or transmission lines, and layout of all existing structures within the property boundaries.
  - f. A decommissioning plan, detailing the expected duration of the Solar Energy Facility and how the Facility will be deconstructed once it is no longer in use. The Applicant shall provide financial security in a form and amount suitable to the Township to guarantee the removal of the equipment when its useful lifespan has been reached or when the Solar Energy Facility is no longer being used, and to ensure the restoration of the land to its original condition.
  - g. Any earth disturbance as a result of the removal of the Solar Energy Facility shall be graded and reseeded to the satisfaction of the Township.
  - h. Other relevant studies, reports, certifications and approvals as may be provided by the Applicant or required by Warwick Township to ensure compliance with all Township regulations.
4. An Applicant shall also be required to file and obtain approval of a land development plan prior to the construction of a Solar Energy Facility.
5. Design and installation
- a. The design of the Solar Energy Facility shall conform to applicable industry standards. A building permit shall be obtained for a Solar Energy Facility per the Pennsylvania Uniform Construction Code (UCC). All wiring shall comply with the applicable version of the National Electric Code (NEC). The local utility provider shall approve all grid interconnection and net metering in accordance with applicable law. The Applicant shall submit certificates of design

compliance obtained by the equipment manufacturers from a certifying organization and any such design shall be certified by an Engineer licensed in the Commonwealth of Pennsylvania.

- b. No advertising, including signage, streamers, pennants, spinners, reflectors, ribbons, tinsel, balloons, flags, banners or similar materials shall be permitted on a Solar Energy Facility. The appropriate manufacturer's or installer's identification and any appropriate warning signs and placards may be displayed on the solar energy system provided they comply with the sign regulations per Article 18 of the Township Zoning Ordinance
- c. Solar Energy Facilities shall be artificially lighted only to the minimum extent required for safety and permitted or required by applicable federal, state or local authority and shall comply with Article 27, Lighting.
- d. All transmission and power lines shall, to the maximum extent practicable, be placed underground.
- e. A Solar Energy Facility shall be enclosed by a fence, barrier or other appropriate means at a height of eight and a half (8 ½) feet to prevent or restrict unauthorized persons or vehicles from entering the property.
- f. The Solar Energy Facility shall be screened from adjacent properties and roadways. The Facility shall be screened from offsite with buffer plantings as specified in the Subdivision and Land Development Ordinance, unless effectively screened from offsite by 100 feet or more of existing woodland vegetation to remain. In lieu of or in combination with a planting screen, a decorative fence screening the equipment may be used.
- g. Clearly visible warning signs shall be placed on the fence, barrier or Facility perimeter to inform individuals of potential hazards.



- h. Solar panels shall be placed such that concentrated solar radiation or glare shall not be directed onto nearby properties or roadways. Solar panels shall have an anti-reflection coating or other treatment to minimize glare impacts.
- i. A Solar Energy Facility shall be sited in such a way that is presents no threat to traffic or to public health and safety.
- j. No adjacent property owner shall be required to remove or cut any plant, bush, crop or tree in order to eliminate or reduce obstructions of sunlight to Solar Energy Facilities.

**SECTION 4.** Article 20, Open Space Provisions, Section 2002.C, Conditional Uses, shall be amended to add new subsection 9 as follows:

- 9. Roof-mounted and ground-mounted solar energy systems, in accordance with § 1927.B, provided the area for ground-mounted systems shall not count toward the minimum required open space.

**SECTION 5.** Article 20, Open Space Provisions, Section 2004, Calculating Open Space Areas, subsection A, shall be amended to add new subsection 7 as follows:

- 7. Areas to be used for ground-mounted solar energy systems.

**SECTION 6.** If any sentence, clause, section or part of this ordinance is, for any reason, found to be unconstitutional, illegal or invalid, such unconstitutionality, illegality or invalidity shall not affect or impair any of the remaining provisions, sentences, clauses, sections or parts hereof. It is hereby declared as the intent of the Board of Supervisors that this ordinance would have been adopted had such unconstitutional, illegal or invalid sentence, clause, section or part thereof not been included herein.

**SECTION 7.** All ordinances or parts of ordinances conflicting with any provisions of this ordinance are hereby repealed insofar as the same affects this ordinance.

**SECTION 8.** This amendment shall be effective 5 days following adoption, as by law provided.

ENACTED AND ORDAINED this 13<sup>th</sup> day of June, 2012.