

**GREENE TOWNSHIP SOLAR ENERGY SYSTEMS  
ORDINANCE NO. 1-2020**

**AN ORDINANCE OF THE TOWNSHIP OF GREENE, BEAVER COUNTY,  
PENNSYLVANIA AMENDING THE ZONING ORDINANCE, CHAPTER 153,  
SECTIONS 153.075-153.078 A-1 AGRICULTURAL DISTRICT, SECTIONS 153.090-  
153.094 N-C NEIGHBORHOOD COMMERCIAL OVERLAY DISTRICT, SECTIONS  
153.105-153.108 R-1 SUBURBAN RESIDENTIAL DISTRICT, SECTIONS 153.120-  
153.123 R-2 GENERAL RESIDENTIAL DISTRICT, SECTIONS 153.135-153.138 C-1  
LIGHT COMMERCIAL DISTRICT, SECTIONS 153.150-153.153 C-2 HIGHWAY  
COMMERCIAL DISTRICT AND SECTIONS 153.165-153.168 I INDUSTRIAL  
DISTRICT, TO PERMIT AS AN ACCESSORY USE, ACCESSORY SOLAR ENERGY  
SYSTEMS (ASES), BY RIGHT IN ALL DISTRICTS AND TO PERMIT AS A  
PRINCIPAL USE, PRINCIPAL SOLAR ENERGY SYSTEMS (PSES), BY RIGHT IN  
INDUSTRIAL AND A-1 ZONING DISTRICTS.**

**SECTION 1 - INTRODUCTION**

**WHEREAS**, the Pennsylvania Municipalities Planning Code, act of July 31, 1968, as amended, 53 P.S. §§ 10101 *et seq.*, enables a municipality through its zoning ordinance to regulate the use of property and to promote the conservation of energy through access to and use of renewable energy resources; and

**WHEREAS**, Greene Township seeks to promote the general health, safety and welfare of the community by adopting and implementing an amendment to the Zoning Ordinance providing for access to and use of solar energy systems; and

**WHEREAS**, the purpose of this Ordinance is to set forth requirements for solar energy systems;

**IT IS HEREBY ENACTED AND ORDAINED** by the Board of Supervisors of Greene Township, Beaver County, Pennsylvania, as follows:

**SECTION 2 – DEFINITIONS**

**ACCESSORY SOLAR ENERGY SYSTEM:** An area of land or other area used for a solar collection system used to capture solar energy, convert it to electrical energy or thermal power and supply electrical or thermal power primarily for on-site use. An accessory solar energy system consists of one (1) or more free-standing ground, roof, or building mounted solar arrays or modules, or solar related equipment and is intended to primarily reduce on-site consumption of utility power or fuels.

**GLARE:** The effect produced by light with an intensity sufficient to cause annoyance, discomfort, or loss in visual performance and visibility.

**PRINCIPAL SOLAR ENERGY SYSTEM:** An area of land or other area used for a solar collection system principally used to capture solar energy, convert it to electrical energy or thermal power and supply electrical or thermal power primarily for off-site use. Principal solar energy systems consist of one (1) or more free-standing ground, or roof mounted solar collector devices, solar related equipment and

other accessory structures and buildings including light reflectors, concentrators, and heat exchangers, substations, electrical infrastructure, transmission lines and other appurtenant structures.

**SOLAR EASEMENT:** A solar easement means a right, expressed as an easement, restriction, covenant, or condition contained in any deed, contract, or other written instrument executed by or on behalf of any landowner for the purpose of assuring adequate access to direct sunlight for solar energy systems.

**SOLAR ENERGY:** Radiant energy (direct, diffuse and/or reflective) received from the sun.

**SOLAR PANEL:** That part or portion of a solar energy system containing one or more receptive cells or modules, the purpose of which is to convert solar energy for use in space heating or cooling, for water heating and/or for electricity.

**SOLAR RELATED EQUIPMENT:** Items including a solar photovoltaic cell, module, panel, or array, or solar hot air or water collector device panels, lines, pumps, batteries, mounting brackets, framing and possibly foundations or other structures used for or intended to be used for collection of solar energy.

1. **SOLAR ARRAY:** A grouping of multiple solar modules with purpose of harvesting solar energy.
2. **SOLAR CELL:** The smallest basic solar electric device which generates electricity when exposed to light.
3. **SOLAR MODULE:** A grouping of solar cells with the purpose of harvesting solar energy.

### **SECTION 3 - ACCESSORY SOLAR ENERGY SYSTEMS (ASES)**

#### **A. Regulations Applicable to All Accessory Solar Energy Systems:**

1. ASES shall be permitted as a use by right in all zoning districts as an accessory use to any lawfully permitted principle or accessory use on the same parcel upon issuance of the ASES Solar Photovoltaic Permit specified in this Ordinance.

#### 2. Exemptions

a. ASES with an aggregate collection and/or focusing area of 100 square feet or less are exempt from this ordinance.

b. ASES constructed prior to the effective date of this Section shall not be required to meet the terms and conditions of this Ordinance. Any physical modification to an existing ASES whether or not existing prior to the effective date of this Section that materially alters the ASES shall require approval under this Ordinance. Routine maintenance or like-kind replacements do not require a permit.

3. The ASES layout, design, installation, and ongoing maintenance shall conform to applicable industry standards and shall comply with the PA Uniform Construction Code (UCC), Act 45 of 1999, as amended, as enforced by Greene Township, and with all other applicable fire and life safety requirements. The manufacturer specifications for the key components of the system shall be submitted as part of the application.

Upon completion of installation, the ASES shall be maintained in good working order in

accordance with standards of the Greene Township codes under which the ASES was constructed. The subject use shall conform to and be maintained in accordance with the above-mentioned manufacturer specifications for the entire life of the use. Failure of the property owner to maintain the ASES in good working order is grounds for appropriate enforcement actions by Greene Township in accordance with applicable ordinances.

4. All on-site utility, transmission lines, and plumbing shall be placed underground to the extent feasible.

5. The owner of an ASES shall provide Greene Township written confirmation that the public utility company to which the ASES will be connected has been informed of the customer's intent to install a grid connected system and approved of such connection. Off-grid systems shall be exempt from this requirement.

6. No signage or graphic content may be displayed on the solar photovoltaic system except the manufacturer's badge, safety information, and equipment specification information. Said information shall be depicted within an area no more than thirty-six (36) square inches in size.

7. Glare

a. All ASES shall be placed such that concentrated solar radiation or glare does not project onto nearby structures or roadways.

b. The applicant has the burden of proving that any glare produced does not have significant adverse impact on neighboring or adjacent uses either through siting or mitigation.

8. Solar Easements

a. Where a subdivision or land development involves the use of solar energy systems, solar easements may be provided. Said easements shall be in writing, and shall be subject to the same conveyance and instrument recording requirements as other easements.

b. Any such easements shall be appurtenant; shall run with the land benefited and burdened; and shall be defined and limited by conditions stated in the instrument of conveyance.

Instruments creating solar easement shall include but not be limited to:

i. A description of the dimensions of the easement including vertical and horizontal angles measured in the degrees or the hours of the day, on specified dates, during which direct sunlight to a specified surface or structural design feature may not be obstructed;

ii. Restrictions on the placement of vegetation, structures, and other objects which may impair or obstruct the passage of sunlight through the easement;

iii. Enumerate terms and conditions, if any, under which the easement may be revised or terminated;

iv. Explain the compensation for the owner of the real property subject to the solar easement for maintaining the easement and for the owner of the real property benefiting from the solar easement in the event of interference with the easement.

c. If required, an ASES owner and/or operator must obtain any solar easements necessary to guarantee unobstructed solar access by separate civil agreement(s) with adjacent property owner(s).

9. Prior to the issuance of a zoning permit, applicants must acknowledge in writing that the issuing of said permit for a solar energy system shall not and does not create in the property owner, its, his, her or their successors and assigns in title or, create in the property itself: (a) the right to remain free of shadows and/or obstructions to solar energy caused by development of adjoining or other property or the growth of any trees or vegetation on such property; or (b) the right to

prohibit the development on or growth of any trees or vegetation on such property.

**10. Decommissioning**

- a. Each ASES and all solar related equipment shall be removed within twelve (12) months of the date when the use has been discontinued or abandoned by system owner and/or operator, or upon termination of the useful life of same.
- b. The ASES shall be presumed to be discontinued or abandoned if no electricity is generated by such solar collector for a period of twelve (12) continuous months.
- c. The ASES owner shall, at the request of the township/borough, provide information concerning the amount of energy generated by the ASES in the last 12 months.

**11. Permit Requirements**

- a. Zoning /building permit applications shall document compliance with this Section and shall be accompanied by drawings showing the location of the system on the building or property, including property lines. Permits must be kept on the premises where the ASES is constructed.
- b. The zoning/building permit shall be revoked if the ASES, whether new or pre-existing, is moved or otherwise altered, either intentionally or by natural forces, in a manner which causes the ASES not to be in conformity with this Ordinance.
- c. The ASES must be properly maintained and be kept free from all hazards, including but not limited to, faulty wiring, loose fastenings, being in an unsafe condition or detrimental to public health, safety or general welfare. In the event of a violation of any of the foregoing provisions, the Code Enforcement Officer shall give written notice specifying the violation to the owner of the ASES to conform or to remove the ASES within 60 days of receipt of notification.

**B. Roof Mounted and Wall Mounted Accessory Solar Energy Systems:**

1. A roof mounted or wall mounted ASES may be located on a principal or accessory building.
2. ASES mounted on roofs or walls of any building shall be subject to the maximum height regulations specified for principal and accessory buildings within each of the underlying Zoning Districts.
  - a. For a building system mounted on a sloped roof that faces the front yard of the parcel, the system must be installed at the same angle (parallel) as the roof on which it is installed with a maximum distance, measured perpendicular to the roof, of eighteen (18) inches between the roof and the highest edge or surface of the system.
  - b. For a building mounted system installed on a sloped roof, the highest point of the system shall not exceed the highest point of the roof to which it is attached and shall not exceed eighteen (18) inches between the roof and highest edge or surface of the system. The system mounting angle is not required to be parallel to the roof angle on side and rear yard facing surfaces.
3. Wall mounted ASES shall comply with the setbacks for principal and accessory structures in the underlying zoning districts.
4. Solar panels shall not be mounted within 4 feet of the roofs' edge.
5. For roof and wall mounted systems, the applicant shall provide evidence that the plans comply

with the Uniform Construction Code (UCC), Act 45 of 1999, as amended and adopted building code of the township that the roof or wall is capable of holding the load imposed on the structure.

**6. Non-conformance**

a. If a building-mounted system is to be installed on any building or structure that is non-conforming because it's height violates the height restrictions in the zoning district in which it is located, the building-mounted system shall be permitted so long as the building-mounted system does not extend above the peak or highest point of the roof to which it is mounted and so long as it complies with the other provisions of this Ordinance.

b. If a building-mounted system is to be installed on a building or structure on a non-conforming parcel that does not meet the minimum setbacks required and/or exceeds the lot coverage limits for the zoning district in which it is located, a building-mounted system shall be permitted so long as there is no expansion of any setback or lot coverage non-conformity and so long as it complies with the other provisions of this Ordinance.

**C. Ground Mounted Accessory Solar Energy Systems:**

**1. Setbacks**

a. The minimum yard setbacks from side and rear property lines shall be equivalent to the principal structure setback in the zoning district.

**2. Height**

a. Freestanding ground mounted ASES shall not exceed fifteen (15) feet.

**3. Coverage**

a. The following components of a ground mounted ASES shall be considered impervious coverage and calculated as part of the impervious coverage limitations for the underlying zoning district:

- i. Foundation systems, typically consisting of driven piles or monopoles or helical screws with or without small concrete collars.
- ii. All mechanical equipment of the system including any structure for batteries or storage cells.

**4. Screening**

a. Ground mounted ASES shall be screened from any adjacent property that is R1 or R2 zoned. The screen shall consist of evergreen plant materials which provide a visual screen. Immediate replacement of dead evergreens is required. In lieu of a planting screen, a decorative six (6) feet tall fence may be used to provide a visual screen.

5. Appropriate safety/warning signage concerning voltage shall be placed at ground mounted electrical devices, equipment, and structures. All electrical control devices associated with the ASES shall be locked to prevent unauthorized access or entry.

6. Ground-mounted ASES shall not be placed within any legal easement or right-of-way location, nor be placed within any storm water conveyance system or in any other manner that would alter or impede storm water runoff from collecting in a constructed storm water conveyance system.

**7. Non-conformance**

a. If a ground-mounted system is to be installed on a parcel containing a structure that is non-conforming because the required minimum setbacks are exceeded, the proposed

system shall be permitted so long as the system does not encroach into the established setback for the parcel.

b. If a ground-mounted system is to be installed on a parcel that is non-conforming because it violates zoning district requirements other than setbacks, then a variance must be obtained for the proposed installation.

## **SECTION 4 - PRINCIPAL SOLARENERGY SYSTEMS (PSES)**

### **A. Regulations Applicable to All Principal Solar Energy Systems:**

1. PSES shall be permitted as a use by right in the Industrial & A-1 Zoning Districts upon issuance of the PSES Solar Photovoltaic Permit specified in this Ordinance.

#### **2. Exemptions**

a. PSES constructed prior to the effective date of this Section shall not be required to meet the terms and conditions of this Ordinance. Any physical modification to an existing PSES, whether or not existing prior to the effective date of this Section that materially alters the PSES shall require approval under this Ordinance. Routine maintenance or like-kind replacements do not require a permit.

3. The PSES layout, design and installation shall conform to applicable industry standards, and shall comply with the PA Uniform Construction Code (UCC), Act 45 of 1999, as amended as enforced by Greene Township and with all other applicable fire and life safety requirements. The manufacturer specifications for the key components of the system shall be submitted as part of the application. The subject use shall conform to and be maintained in accordance with the above-mentioned manufacturer specifications for the entire life of the use.

4. PSES installers must demonstrate they are listed as a certified installer on the PA Department of Environmental Protection's (DEP) approved solar installer list or that they meet the criteria to be a DEP approved installer by meeting or exceeding one of the following requirements:

- a. Is certified by the North American Board of Certified Energy Practitioners (NABCEP).
- b. Has completed an Interstate Renewable Energy Council (IREC) Institute for Sustainable Power Quality (ISPQ) accredited PV training program or a PV manufacturer's training program and successfully installed a minimum of three PV systems.

5. All on-site transmission and plumbing lines shall be placed underground to the extent feasible.

6. The owner of a PSES shall provide to Greene Township written confirmation that the public utility company to which the PSES will be connected has been informed of the customer's intent to install a grid connected system and approved of such connection.

7. No portion of the PSES shall contain or be used to display advertising. The manufacturer's name and equipment information or indication of ownership shall be allowed on any equipment of the PSES provided they comply with the prevailing sign regulations in the zoning district.

#### **8. Glare**

a. All PSES shall be placed such that concentrated solar radiation or glare does not project onto nearby structures or roadways.

b. The applicant has the burden of proving that any glare produced does not have significant adverse impact on neighboring or adjacent uses either through siting or mitigation.

9. Noise from a PSES shall not exceed fifty (50) dBA, as measured at the property line.

10. No trees or other landscaping otherwise required by the municipal ordinances or attached as a condition of approval of any plan, application, or permit may be removed for the installation or operation of a PSES.

11. The PSES owner and/or operator shall maintain a phone number and identify a person responsible for the public to contact with inquiries and complaints throughout the life of the project and provide this number and name to Greene Township. The PSES owner and/or operator shall make reasonable efforts to respond to the public's inquiries and complaints.

12. The PSES owner and/or operator shall conduct/provide on-site solar energy/solar panel and associated solar related equipment safety training for local firefighters and emergency responders prior to commissioning, energizing, and/or activating the PSES.

13. Decommissioning

a. The PSES owner is required to notify the Borough/Township immediately upon cessation or abandonment of the operation. The PSES shall be presumed to be discontinued or abandoned if no electricity is generated by such system for a period of twelve (12) continuous months.

b. The PSES owner shall then have twelve (12) months in which to dismantle and remove the PSES including all solar related equipment or appurtenances related thereto, including but not limited to buildings, cabling, electrical components, roads, foundations and other associated facilities from the property. If the owner fails to dismantle and/or remove the PSES within the established timeframes, the municipality may complete the decommissioning at the owner's expense.

c. At the time of issuance of the permit for the construction of the PSES, the owner shall provide financial security in the form and amount acceptable to Greene Township to secure the expense of dismantling and removing said PSES, regrading as necessary and revegetation/seedling of any disturbed areas to provide erosion control. Specifically, owner shall post a bond for decommissioning in an amount necessary to cover the expense to dismantle and remove the PSES including all solar related equipment or appurtenances related thereto, including but not limited to buildings, cabling, electrical components, roads, foundations and other associated facilities from the property, as security if owner fails to comply with the above decommissioning requirements. In lieu of a bond, owner may deliver other security acceptable to Greene Township.

14. Prior to the issuance of a zoning permit, PSES applicants must acknowledge in writing that the issuing of said permit shall not and does not create in the property owner, its, his, her or their successors and assigns in title or, create in the property itself: (a) the right to remain free of shadows and/or obstructions to solar energy caused by development of adjoining or other property or the growth of any trees or vegetation on such property; or (b) the right to prohibit the development on or growth of any trees or vegetation on such property.

15. Solar Easements

a. Where a subdivision or land development proposes a PSES, solar easements may be provided. Said easements shall be in writing, and shall be subject to the same conveyance and instrument recording requirements as other easements.

b. Any such easements shall be appurtenant; shall run with the land benefited and burdened; and shall be defined and limited by conditions stated in the instrument of conveyance.

Instruments creating solar easement shall include but not be limited to:

- i. A description of the dimensions of the easement including vertical and horizontal angles measured in the degrees or the hours of the day, on specified dates, during which direct sunlight to a specified surface or structural design feature may not be obstructed;
- ii. Restrictions on the placement of vegetation, structures, and other objects which may impair or obstruct the passage of sunlight through the easement;

iii. Enumerate terms and conditions, if any, under which the easement may be revised or terminated;

iv. Explain the compensation for the owner of the real property subject to the solar easement for maintaining the easement and for the owner of the real property benefiting from the

solar easement in the event of interference with the easement.

c. If necessary, a PSES owner and/or operator must obtain any solar easements necessary to guarantee unobstructed solar access by separate civil agreement(s) with adjacent property owner(s).

#### 16. Permit Requirements

a. PSES shall comply with the Township subdivision and land development requirements. The installation of PSES shall be in compliance with all applicable permit requirements, codes, and regulations.

b. The PSES owner and/or operator shall repair, maintain and replace the PSES and related solar equipment during the term of the permit in a manner consistent with industry standards as needed to keep the PSES in good repair and operating condition.

#### 17. Land Development- Installation of a PSES shall constitute land development under Greene Township Subdivision and Land Development Ordinance.

### **B. Ground Mounted Principal Solar Energy Systems:**

#### 1. Minimum lot size

a. The PSES shall meet the lot size requirements of the underlying zoning district.

#### 2. Setbacks

a. The PSES shall comply with the setbacks of the underlying zoning districts for principal structures.

b. The PSES shall be located a minimum of one hundred (100) feet from adjacent R1, R2 districts, and/or non-affiliated residential structures in the underlying zoning district.

#### 3. Height

a. Ground mounted PSES shall not exceed 15 feet in height

#### 4. Impervious Coverage

a. The following components of a PSES shall be considered impervious coverage and calculated as part of the impervious coverage limitations for the underlying zoning district:

- i. Foundation systems, typically consisting of driven piles or monopoles or helical screws with or without small concrete collars.



- ii. All mechanical equipment of PSES including any structure for batteries or storage cells.
- iii. Paved access roads servicing the PSES.
- b. The applicant shall submit a Stormwater Management Plan that demonstrates compliance with the municipal stormwater management regulations.
- c. PSES owners are encouraged to use low maintenance and low growing vegetative surfaces under the system as a best management practice for storm water management.

#### 5. Screening

- a. Ground mounted PSES shall be screened from adjoining residential uses and R1 and R2 Zoning Districts. The screen shall consist of two rows of evergreen trees on 15' staggered centers which provide a visual screen. Evergreens shall be a minimum of 3' tall when planted. Immediate replacement of dead trees shall be required.

6. Ground-mounted PSES shall not be placed within any legal easement or right-of-way location, or be placed within any storm water conveyance system or in any other manner that would alter or impede storm water runoff from collecting in a constructed storm water conveyance system.

#### 7. Security

- a. All ground-mounted PSES shall be completely enclosed by a minimum seven (7) foot high fence with a self-locking gate.
- b. A clearly visible warning sign shall be placed at the base of all pad-mounted transformers and substations and on the fence on the surrounding the PSES informing individuals of potential voltage hazards.

#### 8. Access

- a. At a minimum, a 25' wide paved access road must be provided from a state or township roadway into the site.
- b. At a minimum, a 20' wide gravel access drive with 5' grassed shoulders shall be provided through or around the solar arrays to the pad mounted equipment to allow access for maintenance vehicles and emergency management vehicles including fire apparatus and emergency vehicles. (This does not refer to access drives between the solar racks)

8. The ground mounted PSES shall not be artificially lighted except to the extent required for safety or applicable federal, state, or local authority.

9. If a ground mounted PSES is removed, any earth disturbance resulting from the removal must be graded and reseeded.

#### **C. Roof and Wall Mounted Principal Solar Energy Systems:**

- 1. For roof and wall mounted systems, the applicant shall provide evidence that the plans comply with the Uniform Construction Code (UCC), Act 45 of 1999, as amended, as enforced by Greene Township and adopted building code of the township that the roof or wall is capable of holding the load imposed on the structure.
- 2. PSES mounted on the roof or wall of any building shall be subject to the maximum height regulations of the underlying zoning district.

SECTION 5- MISCELLANEOUS

1. SEVERABILITY

If any chapter, section, subsection, paragraph, sentence or phrase of this ordinance is for any reason declared invalid by a court of competent jurisdiction, such decision shall not affect the validity of the ordinance as a whole or any section or part thereof other than the section or part thereof so declared to be invalid.

2. REPEALER

Any ordinance, chapter, section, subsection, paragraph, sentence or phrase of any ordinance conflicting with the provisions of this ordinance shall and the same is hereby repealed to the extent of such conflict.

ORDAINED and ENACTED this 27<sup>th</sup> day of February, 2020.

ATTEST:

*Kimberly A. Moore*

TOWNSHIP OF GREENE

BY: *[Signature]*

Chairman, Greene Township

Board of Supervisors

BY: *[Signature]*

Supervisor

BY: *Merry M. Smith*

Supervisor