Solar Energy System Ordinance

## Section 1 – Introduction

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

**WHEREAS**, \_\_\_\_\_\_ Township (hereinafter referred to as “Township”) seeks to promote the general health, safety and welfare of the community by adopting and implementing this Ordinance providing for access to and use of solar energy systems; and

**WHEREAS**, it is the intention of the Township to create such an ordinance to set requirements for solar energy systems;

**NOW, THEREFORE**, The Council of \_\_\_\_\_\_ Township, \_\_\_\_\_\_ County, Pennsylvania, hereby ordains:

## Section 2 – Definitions

ACCESSORY SOLAR ENERGY SYSTEM (ASES): (often referred to as residential solar) 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 on-site use. An accessory solar energy system consists of one (1) or more free-standing ground, or roof mounted, solar arrays or modules, or solar related equipment and is intended to primarily reduce on-site consumption of utility power or fuels.

APPLICANT: The individual or entity seeking approval for a solar energy system pursuant to this Ordinance. The owner of the real property upon which the solar energy system shall be erected, as well as the Applicant, shall be responsible for compliance with this Ordinance.

PRINCIPAL BUILDING: A building or structure in which is conducted the principal use of the lot on which the building or structure is located.

PRINCIPAL SOLAR ENERGY SYSTEM (PSES): (often referred to as Solar Farm or Commercial Solar) 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 ENERGY: Radiant energy (direct, diffuse and/or reflective) received from the sun.

SOLAR ENERGY SYSTEM: A solar photovoltaic cell, module, or array, or solar hot air or water collector device, which relies upon solar radiation as an energy source for collection, inversion, storage, and distribution of solar energy for electricity generation or transfer of stored heat.

1. SOLAR ARRAY: A grouping of multiple solar modules with the 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.

SOLAR GRAZING: The practice of grazing livestock on solar farms. Sheep are the most common solar grazing animals, as they are the best-suited species. For the safety of low-mount solar arrays, goats, cows, pigs, and horses are not recommended.

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

## Section 3 – Accessory Solar Energy Systems (ASES)

1. Regulations Applicable to All Accessory Solar Energy Systems:
	1. Accessory Solar energy systems are a Permitted Use in all Zoning Districts
	2. § 150-60 Observance of Performance Standards must be adhered to.
		1. Exemptions
			1. 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 and installation shall conform to applicable industry regulations and with all applicable fire and life safety requirements.
	4. All on-site utility, transmission lines less than 34.5 kV, and plumbing shall be placed underground to the greatest extent possible.
	5. The ASES shall be designed to use the energy created primarily for on-site use.
	6. All solar energy systems should be designed and located to ensure solar access without reliance on and/or interference from adjacent properties.
	7. All ASES shall be situated to eliminate concentrated glare onto nearby structures or roadways.
2. 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 buildings within each of the applicable zoning districts.
	3. Wall mounted ASES shall comply with the building setbacks in the applicable zoning districts.
	4. Solar panels shall not extend beyond any portion of the roof edge.
	5. The owner shall provide evidence certified by an appropriately licensed professional that the roof is capable of holding the load of the ASES.
3. Ground Mounted Accessory Solar Energy Systems:
	1. Setbacks.
		1. The minimum setbacks from side and rear property lines shall be equivalent to the building setbacks in the applicable zoning district.
		2. A ground mounted ASES shall not be located in the required front setback.
		3. Ground mounted ASES are prohibited in front yards unless unique physical circumstances or conditions exist that preclude it from being located in a side or rear yard. Such physical conditions may include, but are not limited to, topography, restricted solar access in other yards, other resource constraints, unusual situation of the principal use on the parcel, etc.
	2. Freestanding ground mounted ASES solar panels shall not exceed 25 feet in height above the ground elevation surrounding the systems.
	3. Coverage.
		1. The area beneath the ground mounted ASES is considered pervious cover. However, use of impervious construction materials under the system could cause the area to be considered impervious and subject to stormwater planning.
	4. Ground mounted ASES 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 construed storm water conveyance system.
	5. If a ground mounted ASES is removed, any earth disturbance as a result of the removal of the ground mounted solar energy system shall be graded and returned to environmentally stable condition.

## Section 4 – Principal Solar Energy Systems (PSES)

1. Regulations Applicable to All Principal Solar Energy Systems:
	1. Principal Solar energy systems are a Conditional Use in A-1, RC-1 C-1, I-1 Zoning Districts
	2. Project narrative including the following: an overview of the project, project location, the approximate generating capacity, the number, representative types and heights of facilities to be constructed, including their generating capacity, dimensions, and respective manufacturers, and description of any ancillary facilities to the solar-energy system.
	3. An affidavit or similar evidence of agreement between the property owner and the solar-energy facility owner or operator demonstrating permission to apply for necessary permits for construction and operation of a solar-energy facility.
	4. All PSES applications after the effective date of this ordinance shall be required to meet the terms and conditions of \_\_\_\_\_\_ Township Code, including but not limited to § 112- Stormwater Management, § 119 Subdivision and Land Development and § 150-60 Observance of Performance Standards.
	5. 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 any existing PSES, whether or not existing prior to the effective date of this Section that expands the PSES shall require approval under this Ordinance. Routine maintenance or replacements do not require a permit.
	6. The PSES layout, design and installation shall conform to applicable industry regulations, and with all other applicable fire and life safety requirements.
	7. All on-site utility transmission lines less than 34.5 kV and plumbing shall be placed underground to the greatest extent feasible.
	8. The owner of a PSES shall provide the 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.
	9. If a PSES is being used as an accessory use for commercial or industrial activity on another property, then the Township shall be informed of the intent of the PSES.
	10. Signage shall comply with the prevailing sign regulations.
	11. All PSES shall be situated to eliminate concentrated glare onto nearby structures or roadways.
	12. All solar energy systems should be designed and located to ensure solar access without reliance on and/or interference from adjacent properties.
	13. The PSES owner and/or operator shall maintain a phone number throughout the life of the project for the \_\_\_\_\_\_ Township Code Enforcement Officer to contact with inquiries and verified complaints. The PSES owner and/or operator shall make reasonable efforts to respond to the inquiries and complaints. A contact name, with knowledge of the system, must be provided to \_\_\_\_\_\_ Township with updates due to employee advancement or turnover.
2. Ground Mounted Principal Solar Energy Systems:
	1. Minimum Lot Size
		1. The PSES shall meet the lot size requirements of the applicable zoning district.
	2. Setbacks
		1. PSES shall comply with the following setback requirements:
			1. building setbacks of the applicable zoning districts, except:
			2. Adjacent to any residential district (R-1, R-2, R-3) or parcel with an existing residential structure, the solar panels must follow a 50 foot setback while the fencing shall comply with the setbacks of the underlying zoning district.
		2. If the PSES occupies two or more adjacent properties, setbacks between the adjacent properties shall be waived along the shared property boundaries so that the PSES may be installed continuously and make most efficient use of the project area.
	3. Height
		1. Ground mounted PSES solar panels shall not exceed 25 feet in height.
	4. Impervious Coverage
		1. According to Pennsylvania DEP, the area beneath the ground mounted PSES is considered pervious cover. However, use of impervious construction materials under the system could cause the area to be considered impervious and subject to the overall lot coverage requirement.
		2. Gravel of paved access roads servicing the PSES shall be considered impervious coverage and calculated as part of the impervious coverage limitations.
	5. Screening and vegetation
		1. Street screening shall consist of slat fencing or shrubs, 6’ - 8’ high when mature, shall be planted every 15 feet of property abutting a public right-of-way. Shrubs shall be planted adjacent to or outside of the road right-of-way. Solar perimeter fence shall be placed between shrubs and solar panels. Reasonable modifications to these requirements may be requested through Section 5-3: Modifications, below.
		2. Residential buffer screening may be slat fencing or a row of evergreen conifers or broadleaf evergreens spaced in accordance with the chosen species to achieve a continuous visual barrier reaching 6-8’ in height within 2 years of planting. Screening may be a combination of plantings and/or structures with prior approval by the Township. Reasonable modifications to these requirements may be requested through Section 5-3: Modifications, below.
		3. Perimeter fence shall be placed between shrubs and solar panels.
		4. Widespread use of herbicides to control ground cover growth is prohibited.
	6. Unless agreed to by easement or right-of-way holder, 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
		1. In accordance with NEC, all ground mounted PSES shall be completely enclosed by fencing with locking gate. Current NEC code requires a minimum six (6) foot high fence with barbed wire or a 7’ high fence.
		2. A clearly visible warning sign shall be placed at the base of all pad-mounted transformers and substations and on the fence surrounding the PSES informing individuals of potential voltage hazards.
	8. Access drives to solar inverter stations are required to allow for maintenance and emergency management vehicles. A recommended minimum cartway width is 12'.
	9. If a ground mounted PSES is removed, any earth disturbance as a result of the removal of the ground mounted solar energy system must be returned to an environmentally stable condition.
3. Solar Grazing

Solar grazing with sheep is highly encouraged and preferred method of controlling ground cover growth. Township believes co-pasturing is very beneficial to maintain our rural character. Benefits of solar grazing:

* + - * + Farm income is more diversified and increases family farm viability.
				+ Farmland conservation and keeps farmland in farm production.
				+ Added visual benefit and esthetics for the community.
				+ Solar grazing contributes dairy, meat, and wool to the locally sourced, renewable farm market.
				+ With time, planning, and good management, sheep can do 90 to 100% of the vegetative maintenance work inside the fence, eliminating the need for mowing, reducing emissions and costs.
	1. Setbacks: when employing solar grazing, reduce front and back yard setbacks maximum 50%
		1. If solar grazing ceases, where reduced setbacks are utilized, must plant shrubs every 10’ of road frontage instead of the standard 15’ of frontage.
	2. Provide water well for sheep if public water or reliable on-lot water (steam or pond) is not available.
	3. Seed fenced area with grazing friendly seed mix, Fuzz & Buzz seed mix or similar.
	4. Where applicable, install fencing gates between adjoining solar parcels for moving sheep and line up gates between separately fenced sections of the arrays.
	5. Allow your farmer to use portable low voltage energizers and fences OR consider installing low (3’) interior fences to facilitate best grazing/vegetation management.
	6. Consider installing pipe fences and gates around inverter/transformer pads.
	7. Allow signs on road gate for sheep farmer to advertise their organic, value added products.
1. Roof Mounted Principal Solar Energy Systems:
	1. The owner shall provide evidence certified by an appropriately licensed professional that the roof is capable of holding the load of the PSES.
	2. PSES mounted on roofs of any building shall be subject to the maximum height regulations specified for buildings within the applicable zoning district.
2. Local Emergency Services
	1. The applicant shall provide a copy of the project summary and site plan to local emergency services, including paid or volunteer fire department(s).
	2. The applicant shall cooperate with emergency services to develop and coordinate implementation of an emergency response plan for the solar energy facility.
3. Decommissioning:
	1. An affidavit, or similar evidence, signed by the property owner and the PSES facility owner affirming a lease agreement with a decommissioning clause (or similar) and a Successors and Assigns clause. The decommissioning clause must provide sufficient funds to dismantle and remove the PSES, including all solar related equipment or appurtenances related thereto, including but not limited to buildings, electrical components, roads and other associated facilities from the property. The Successors & Assigns clause must bind those successors and assigns to the lease agreement.
	2. The PSES owner is required to notify the 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 and the owner has not initiated necessary remedial actions to return the PSES to a generating state. If the PSES owner fails to dismantle and/or remove the PSES within eighteen (18) months of cessation or abandonment, the Township may complete the decommissioning at the property owners expense.

## Section 5 – Administration and Enforcement

1. Applications
	1. Permit applications shall document compliance with this Ordinance and shall be accompanied by drawings showing the location of the solar energy system on the building or property, including property lines. Permits must be kept on the premises where the solar energy system is located.
	2. The permit shall be revoked if the solar energy system, whether new or preexisting, is moved or otherwise altered, either intentionally or by natural forces, in a manner which causes the solar energy system not to be in conformity with this Ordinance. In the case of nonconformity caused by natural forces, the owner shall have a maximum of 90 days to initiate necessary remedial action to bring system back in conformance with the ordinance.
	3. The solar energy system 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.
	4. For PSES systems, Conditional Use approval is required prior to obtaining Land Development Plan approval. The Conditional Use approval and Land Development Plan processes can be concurrent. All necessary stormwater plan approval, E & S and NPDES permits must be approved prior to receiving final Council approval of the Land Development Plan. An approved Land Development plan is required for application for a Zoning Permit.
	5. ASES systems for single-family residential use are exempt from the Land Development Process, but a Zoning Permit is required.
2. Fees and Costs
	1. The Applicant shall pay all permit application fees and inspection fees when seeking approval of a solar energy system under this Ordinance, which fees shall be set by resolution.
	2. The Applicant shall, prior to receipt of an approved permit, sign a \_\_\_\_\_\_ Township Developers Agreement and submit funds for a Developer’s Account which will reimburse the Township for any actual fees or costs incurred arising out of or related to the Application (collectively the "Costs"). The Costs shall include, but not be limited to, engineering and legal fees. Any funds remaining after project completion shall be returned to the Developer.
3. Modifications

The Township may grant modification of the requirements of one or more provisions of this Ordinance if the literal enforcement will exact undue hardship because of peculiar conditions pertaining to the property in question, provided that such modification will not be contrary to the public interest and that the purpose and intent of the Ordinance is observed. All requests for a modification shall be in writing and shall state in full the grounds and facts of unreasonableness or hardship on which the request is based, the provision or provisions of the Ordinance involved and the minimum modification necessary.

1. Enforcement
	1. Upon the receipt of a written complaint setting forth the existence of unauthorized construction, modification, or use in violation of this Ordinance, or other notice thereof, the, Zoning and Code Enforcement Officer, that may be authorized by the Township Council shall cause written notice to be given either by personal service or registered or certified mail to the Applicant of the Property upon which the violation exists, to immediately cease and the construction, modification or the unauthorized use of the solar energy system. Such a written notice shall be required to enforce the remedies set forth in this section. However, the Township shall still be entitled to give a verbal notice for defective systems as authorized above.
	2. Upon failure of such Applicant to comply as directed in said notice, the Enforcement Officer, other municipal officials or solicitor may appear on behalf of the Township and initiate legal proceedings to enforce the provisions of this Ordinance before a District Magistrate.
	3. Any Applicant who or which shall violate or permit to be violated the provisions of this Ordinance shall, upon being found liable therefore in a civil enforcement proceeding brought by \_\_\_\_\_\_ Township before a District Magistrate, pay a fine of not more than six hundred ($600.00) dollars, plus all court costs, including reasonable attorneys fee's incurred by (Township) as a result thereof. No fine shall commence or be imposed, levied, or be payable until the date of the determination of the violation by a District Magistrate. Each day that a violation exists and is continued shall constitute a separate offense, unless the District Magistrate who determines that a violation has occurred further shall determine that there was a good faith basis for the defendant to have believed that there was no such violation, in which event there shall be deemed to have been only one such violation until the fifth day following the date of determination by such District Magistrate and thereafter every day shall constitute a separate offense.
	4. In addition, the Township shall also be entitled to recover from any Applicant all the Township's costs or fees (collectively the "Costs") arising out of or related to the application or enforcement of this Ordinance. Such Costs may also include those to remedy violations of this Ordinance or to abate nuisances. The Costs shall include, but not be limited, engineer fees, geologist fees, attorney fees, zoning officer fees, and staff/employee time. The Costs may be collected as a Municipal Claim under applicable law against the property upon which the solar energy system, or portions thereof, is located.

## Section 6 – Construction and Severability

1. The provisions of this Ordinance shall be construed to the maximum extent possible to further the purposes and policies set forth herein, as consistent with applicable state statutes and regulations. If the provisions of this section and state law are in conflict, then state law shall prevail.
2. It is the intention of the Township Council that the provisions of this Ordinance are severable and if any provisions of this Ordinance shall be declared unconstitutional or invalid by the judgment or decree of a court of competent jurisdiction, such unconstitutionality or invalidity shall not affect any of the remaining provisions of this Ordinance.

## Section 7 – Repealer

All prior ordinances that are inconsistent herewith are hereby repealed to the extent of such inconsistency.

## Section 8 – Effective Date

This Ordinance shall become effective five (5) days after its enactment.

**DULY ORDAINED AND ENACTED** by \_\_\_\_\_\_ Township Council, \_\_\_\_\_\_ County, Pennsylvania in lawful session assembled on the \_\_ day of May, 20XX.

\_\_\_\_\_\_ TOWNSHIP COUNCIL

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 \_\_\_\_\_\_ Township Manager

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