



YCPC SOLAR ENERGY SYSTEMS MODEL ORDINANCE



APRIL 2022

The following document is a model ordinance containing suggested language for municipalities interested in providing use regulations for Accessory Solar Energy Systems (ASES) and Solar Energy Facilities (SEFs). The YCPC recommends that municipalities adopt regulations related to ASES and SEFs in a stand-alone ordinance with references to the stand-alone ordinance in their zoning ordinance. This practice would allow municipalities to more easily amend regulations for this use as the technology, societal interest, and legislation involving solar energy systems continues to change. However, with this understanding, the language found in this model ordinance is also designed so that it can be incorporated into existing municipal zoning ordinances to enhance and clarify the regulations that are being required by the municipality for these uses. *Italicized text that is highlighted in gray* is an indicator of text that is specifically intended to be included in municipal zoning ordinances. These sections are also compiled in Appendix A at the end of this document.

This model ordinance serves as a summary document of the various components that the YCPC believes are necessary for a municipality to consider as it envisions the possible interests from residents and private companies in solar energy systems and facilities within their municipality. It should be the goal of the municipality to clearly articulate their expectations and requirements to any new potential solar energy developer, as well as to clearly address the concerns and interests of municipal residents.

Municipalities are encouraged to alter the text of this model ordinance to best suit their municipality, as what works best for one municipality may not provide the same results in another. There are sections of this model ordinance that have been left blank specifically for this reason, and there are sections where options have been provided from which a municipality may choose.

As always, municipal staff and officials are encouraged to reach out to YCPC staff if questions arise regarding any of the content found within this model ordinance.

Solar Energy Systems Model 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 municipality 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, the Municipality, as defined below 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, the purpose of this Ordinance is to set requirements for solar energy systems;

IT IS HEREBY ENACTED AND ORDAINED by the governing body of the Municipality as follows:

Section 2 - Definitions

ACCESSORY BUILDING: A building which (1) is subordinate to and serves a principal building; (2) is subordinate in area, extent or purpose to the principal building; (3) contributes to the comfort, convenience, or necessity of occupants of the principal building; and (4) is located on the same lot as the principal building.

ACCESSORY SOLAR ENERGY SYSTEM (ASES): 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: (a) primarily; or (b) solely 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.

AGRIVOLTAICS: The co-development of the same area of land for both solar photovoltaic power and “Normal Farming Operations as defined by P.L. 454, No. 133 (1982), the Protection of Agricultural Operations from Nuisance Suits and Ordinances Act”.

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.

BUFFER: A landscaped area, or an area of preserved vegetation, intended to be used as a means of limiting the potentially adverse effects created by a use onto adjoining properties, streets, and uses.

BUFFER YARD: An area whose dimensions normally exceed the normal building setback or yard requirement used to protect low-density uses and zoning districts from adjacent higher intensity uses and districts. Buffer Yards are to be measured from the property boundary line.

DISCONNECTED IMPERVIOUS AREA: An impervious or impermeable surface that is disconnected from any stormwater drainage or conveyance system and is redirected or directed to a previous area, which allows for infiltration, filtration, and increased time of concentration.

FINANCIAL SECURITY: A form of security including a cash deposit, surety bond, irrevocable letter of credit, cashier's check, or escrow account from a federal or Commonwealth chartered lending institution in the amount of 110% of the total proposed decommissioning costs and in a form satisfactory to the municipality and municipal solicitor.

MUNICIPALITY: _____ Borough/City/Township, York County, Pennsylvania.

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

SOLAR EASEMENT: 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 ENERGY FACILITY (SEF): An area of land used for a solar collection system principally to capture solar energy, convert it to electrical energy or thermal power and supply electrical or thermal power primarily for off-site use.

SOLAR ENERGY PROJECT: A grouping of two or more Solar Energy Facilities which are held by owner or leased to a common lessor and which are part of a single solar energy production development project.

SOLAR ENERGY PROJECT OWNER: The individual, group or entity responsible for the permitting, construction and/or operation of a Solar Energy Facility to the Solar Project Connection.

SOLAR ENERGY SYSTEM: A solar photovoltaic cell, module/panels, 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/panels 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.
4. 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 cooling, and/or for electricity.

SOLAR FACILITY CONNECTION: The high-voltage electric conveyance lines which connect a Solar Energy Facility to the Solar Project Connection.

SOLAR PROJECT CONNECTION: The electric conveyance lines which connect a Solar Energy Facility to the high-voltage electric interconnection grid.

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)

A. Regulations/Criteria Applicable to All Accessory Solar Energy Systems:

1. *ASES shall be permitted as a use by right in all zoning districts.*
2. 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. ASES with a kilowatt per hour (kWh) electricity production of 12 kWh or less are exempt from this ordinance, but will require a building permit and must comply with all applicable provisions of the Uniform Construction Code (UCC). Building permits submitted for ASES to be exempt hereunder shall include a certification of the kWh electricity production expected from the ASES.

4. The ASES layout, design and installation shall conform to applicable industry standards, such as those of the American National Standards Institute (ANSI), Underwriters Laboratories (UL), the American Society for Testing and Materials (ASTM), Institute of Electrical and Electronics Engineers (IEEE), Solar Rating and Certification Corporation (SRCC), Electrical Testing Laboratory (ETL), Florida Solar Energy Center (FSEC) or other similar certifying organizations, and shall comply with the Municipality's Building Code, and with all applicable fire and life safety requirements. The manufacturer specifications for the key components of the system shall be submitted as part of the application. Additionally, ASES installers must certify 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. For residential applications, the ASES installer must also be a registered home improvement contractor with the PA Attorney General's Office.
6. Upon installation, the ASES shall be maintained in good working order in accordance with the standards of the applicable codes under which the ASES was constructed. Failure of the property owner to maintain the ASES in good working order is grounds for appropriate enforcement action by the _____. The _____ may perform the services required and charge the owner appropriate fees. Nonpayment of fees may result in a lien against the property.
7. The ASES shall be designed so that all energy created by the ASES is to be used on site. However, in the event that sufficient excess energy is created to merit its transmission off-site, the owner of the ASES shall provide the _____ written confirmation that the public utility company to which the ASES will be connected and has been informed of the customer's intent to install a grid connected system and approval of such connection has been granted.
8. All on-site utility lines, transmission lines, and plumbing shall be placed underground to the greatest extent possible. Any off-site transmission lines must be placed within legal rights-of-way and proof of the rights-of-way shall be provided to the _____ prior to land development plan approval. Privately-owned off-site transmission lines proposed to be in a public street right-of-way shall require _____ approval and a right-of-way agreement with provisions indemnifying the _____ from all liability related to the transmission lines.
9. Signage shall comply with the prevailing sign regulations.

10. All solar energy systems shall be designed and located to ensure solar access without reliance on and/or interference from adjacent properties.
11. All ASES shall be situated to prevent concentrated glare onto nearby structures or roadways. Exterior surfaces shall have a non-reflective finish. The applicant/operator has the burden of proving that any glare produced does not have significant adverse impacts on neighboring or adjacent uses either through siting or mitigation.

B. Roof-Mounted and Wall-Mounted Accessory Solar Energy Systems (ASES):

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 applicable zoning districts, **OR**, the total height of a building with an ASES shall not exceed by more than _____foot/feet the maximum building height specified for principal or accessory buildings within the applicable zoning district.*
3. The owner shall provide evidence certified by an appropriately licensed professional that the roof or wall-mounted system complies with the Uniform Construction Code and that the roof or wall is capable of holding the load of the ASES.
4. *Wall-Mounted ASES shall comply with the setbacks for principal buildings in the applicable zoning districts, **OR**, Wall-Mounted ASES shall comply with the setbacks for accessory buildings in the applicable zoning districts.*
5. Solar panels shall not extend beyond any portion of the roof edge.
6. *Zoning/building permit applications shall document compliance with these provisions.*

C. Ground-Mounted Accessory Solar Energy Systems:

1. *Setbacks.*
 - a. *The minimum setbacks from side and rear property lines shall be equivalent to the accessory building setbacks in the applicable zoning district, **OR**, the minimum setbacks from side and rear property lines shall be equivalent to the principal building setbacks in the applicable zoning district.*
 - b. *A Ground-Mounted ASES shall not be located in the required front setback.*
 - c. *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, restricted solar access in other yards, other resource constraints, unusual situation of the principal use on the parcel, etc.*

2. **Height.**

*Freestanding Ground-Mounted ASES shall not exceed the maximum accessory structure height in the applicable zoning district, **OR**, Ground-Mounted ASES shall not exceed _____ feet in height above the ground elevation surrounding the systems.*

3. **Location.**

Ground-Mounted ASES shall not be placed within any legal easement or right-of-way or be placed within any stormwater conveyance system, or in any other manner that would alter or impede stormwater runoff from collecting in a constructed stormwater conveyance system, unless the Applicant can demonstrate, to the satisfaction of the municipality, that the ASES will not impede stormwater management, or in any manner alter or impede stormwater runoff from collecting in a constructed stormwater conveyance system.

4. **Removal.**

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 re-seeded.

5. **Stormwater Management.**

Stormwater runoff from an ASES shall be managed in accordance with the requirements of the _____ Stormwater Management Ordinance.

6. **Buffering.**

- a. Ground-Mounted ASES shall be buffered from any adjacent residential uses by a buffer yard of _____ feet. Such buffer yard shall be part of the installation and shall be parallel and adjacent to the property boundary line.
- b. Ground-Mounted ASES shall be buffered from any adjacent agricultural uses by a buffer yard of _____ feet. Such buffer yard shall be part of the installation and shall be parallel and adjacent to the property boundary line.
- c. Ground-Mounted ASES shall be buffered from any other adjacent uses by a buffer yard of _____ feet. Such buffer yard shall be part of the installation and shall be parallel and adjacent to the property boundary line.

7. **Signage.**

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.

Section 4 - Solar Energy Facility (SEF)

A. Regulations/Criteria Applicable to All SEFs:

1. SEFs 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 SEF, whether or not existing prior to the effective date of this Section that expands the SEF shall require approval under this Ordinance. Routine maintenance or replacements do not require a permit.
2. The SEF layout, design and installation shall conform to good industry practice. “Good industry practice” shall mean the practices, methods, standards, and acts (engaged in or approved by a significant portion of the solar power industry for similar facilities in similar geographic areas that are similar in size and complexity) as the same may change from time to time, that, at a particular time, in the exercise of reasonable professional judgment in light of the facts known at the time the decision was made, would have been expected to accomplish the desired result in a manner consistent with applicable law, regulation, codes, good business practices, reliability, safety, environmental protection, economy, expedition, and shall comply with the PA Uniform Construction Code and with all other applicable fire and life safety requirements.
3. SEF installers of projects rated at 5 MW or greater must demonstrate that they have installed at least _____ utility-scale solar projects in the last __ years. SEF installers must certify 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.
4. All on-site utility transmission lines and plumbing shall be placed underground to the greatest extent feasible.
5. DC voltage Solar Array Connections may be located above ground. AC Solar Facility Connections should be located underground where feasible. However, AC Solar Facility Connections may be located above ground where the Applicant can demonstrate to the satisfaction of the _____ that the overall environmental impacts would support above ground locations.
6. The Applicant shall include a construction transportation plan that shows all roadways that will be utilized to access the site, which shall be forwarded to the Municipality for

review. The plan shall address conditions for repair or replacement if damage to municipal roads occurs during construction activities.

7. The owner of a SEF shall provide the Municipality written confirmation that the public utility company to which the SEF will be connected has been informed of the customer's intent to install a grid connected system and approved of such connection. The owner shall provide a copy of the final inspection report or other final approval from the utility company to the Municipality prior to the issuance of a certificate of use and occupancy for the SEF.
8. If a SEF is being used as an accessory use for commercial/industrial activity on another property, then the municipality shall be informed of the intent of the SEF.
9. No portion of the SEF 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 SEF provided they comply with the prevailing sign regulations.
10. All SEFs shall be situated to prevent concentrated glare onto nearby structures or roadways. Exterior surfaces shall have a non-reflective finish. 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 as provided in this ordinance.
11. All solar energy systems shall be designed and located to ensure solar access without reliance on and/or interference from adjacent properties.
12. A noise management plan that addresses noise produced during construction and during the facilities operation, to be approved by the _____, shall be included with the SALDO application. The plan, at a minimum, shall separately address noise during construction and facility operations and include mitigation, an assessment of the noise that will emulate at the perimeter fence, and the contact information for the individual(s) who is responsible for implementation and compliance both during construction and operations. The volume of sound inherently and recurrently generated shall be controlled so as not to cause a nuisance to adjacent uses. During operation of the SEF, audible sound shall follow best management practices regarding sound, as measured at the property line on a non-participating landowner's property.
13. The SEF owner and/or operator shall maintain and post on fencing an identification of a local person or entity responsible for the public to contact with inquiries, complaints, and public safety issues, throughout the life of the project and provide the number and name to the municipality.
14. Upon installation, the SEF shall be maintained in good working order in accordance with the standards of the _____ codes under which the SEF was constructed. Failure of the property owner to maintain the SEF in good working order is grounds for appropriate enforcement action by the _____. The _____ may perform

the services required and charge the owner appropriate fees. Nonpayment of fees may result in a lien against the property.

15. The following requirements apply to de-commissioning:

- a. The SEF owner is required to notify the municipality immediately upon permanent cessation or abandonment of the operation. The SEF 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. If it is determined that an SEF has permanently ceased its operation, or has been abandoned, the SEF owner shall have eighteen (18) months in which to dismantle and remove the SEF, including all solar related equipment or appurtenances related thereto, including but not limited to buildings, cabling, electrical components, roads, foundations, solar facility connections and the associated facilities in accordance with agreements with landowners and good industry practice.
- c. In the event that the present SEF owner has temporarily ceased its operation, but is in the process of transferring ownership and SEF management, the present owner has the responsibility of notifying the municipality which will allow this transference to occur within 18 months of this notification.
- d. To the extent possible, the materials shall be re-sold or salvaged. Materials that cannot be re-sold or salvaged shall be disposed of at a facility authorized to dispose of such materials by federal or state law.
- e. Any soil exposed during the removal shall be stabilized in accordance with applicable erosion and sediment control standards.
- f. Any access drive paved aprons from public roads shall remain for future use unless directed otherwise by the landowner.
- g. The SEF site area shall be restored to its pre-existing condition, suitable for its prior use, except the landowner may authorize, in writing, any buffer landscaping or access roads installed to accommodate the SEF to remain.
- h. Any necessary permits, such as Erosion and Sedimentation and NPDES permits, shall be obtained prior to decommissioning activities.
- i. At the time of issuance of approval for the construction of the SEF, the owner shall provide financial security in the form and amount acceptable to the municipality and in favor of the municipality, to secure its obligations under this Section.
 - 1) The SEF developer shall, at the time of the SALDO application, provide the municipality with an estimate of the cost of performing the decommissioning activities required herein. The solar project owner shall provide financial security of 110% of the estimated cost of decommissioning. The estimate may include an estimated salvage and resale value, discounted by a factor of 10%.

The decommissioning cost estimate formula shall be: gross cost of decommissioning activities minus 90% credit of salvage and resale value equals the decommissioning cost estimate.

- 2) On every 5th anniversary of the date of providing the decommissioning financial security, the SEF owner shall provide an updated decommission cost estimate, utilizing the formula set forth above with adjustments for inflation and cost and value changes. If the decommissioning security amount increases, the SEF owner shall remit the increased financial security to the municipality within 30 days of the approval of the updated decommissioning security estimate by the municipality. If the decommissioning security amount decreases by greater than 10%, the municipal owner shall release for security any amounts held in excess of 110% of the updated decommission cost estimate.
- 3) Decommissioning security estimates shall be subject to review and approval by the municipality, and the SEF developer/owner shall be responsible for administrative, legal, and engineering costs incurred by the municipality for such review.
- 4) The decommissioning security may be in the form of cash deposit, surety bond, irrevocable letter of credit, cashier's check, or escrow amount from a federal or Commonwealth chartered lending institution in the amount of 110% of the total proposed decommission cost estimate and in a form satisfactory to the municipality and their solicitor.
- 5) Prior to final approval of any plans for a SEF, the SEF developer shall enter into a decommissioning agreement with the municipality outlining the responsibility of parties under this agreement as to the decommissioning of the SEF.

B. Ground-Mounted SEF:

1. The SEF development area is equal to the total acres of land subject to lease by the SEF developer. Where the area of land subject to the lease is greater than 75% of the parcel, the entire parcel will be considered to be the SEF development area.
2. Solar Related Equipment Locations.
 - a. Solar Related Equipment may:
 - i) not be located on prime (Class I, II and III) agricultural soils; **OR,**
 - ii) only be located on _____% of the SEF development area containing prime soils; **OR,**
 - iii) be limited to _____% of the development area containing prime soils, unless the area will be devoted to Agrivoltaic activities, in which case _____% of the prime soils may be included in the development area.

- b. For each parcel on which a SEF, or a component of a SEF, is proposed, a map shall be provided by the Applicant detailing the SEF development area, the constrained area of the Class I, II, and III agricultural soils, and the portion of the SEF development that may be devoted to Solar Related Equipment.
- c. Solar Related Equipment shall only be placed within that portion of any lot that has a defined SEF development area.
- d. Solar Related Equipment shall not be located in:
 - 1) Floodways, as identified in the FEMA FIRM mapping.
 - 2) Regulated natural and man-made drainage corridors, extending twenty-five (25) feet from the centerline of any such drainage feature, unless the _____ at time of plan approval determines a lesser setback would create less impacts to the overall project.
 - 3) Wetlands.
 - 4) Riparian buffers extending twenty-five (25) feet from any wetland or body of water, unless the _____ at the time of plan approval determines a lesser setback would create less impacts to the overall project.
 - 5) Slopes in excess of fifteen percent (15%), unless the _____ at the time of plan approval determines location in an area in excess of 15% would create less impacts to the overall project.
 - 6) Legal easements and rights-of-way.
 - 7) *Setback areas, as defined in the underlying zoning district, except as permitted by Section 4.B.4.c.*
- e. Woodland areas.
 - i) Woodland largely consisting of mature trees are to remain undisturbed and shall not be removed for the purposes of creating SEFs; **OR,**
 - ii) If the removal of trees is necessary in order to create a SEF, such removal shall be as limited as possible. Every mature tree removed shall be replaced by the Applicant at a location approved by the municipality at a ratio of two (2) new trees for every one (1) mature tree removed.

3. *Minimum Lot Size.*

- i) *The Ground-Mounted SEF shall meet the lot size requirements of the applicable zoning district, **OR,***

- ii) *The Ground-Mounted SEF shall not be situated on an individual parcel, or on adjacent, combined lots, smaller than _____ acres/square feet.*

4. **Setbacks.**

a. **Ground-Mounted SEFs shall:**

- i) *comply with the setbacks of the applicable zoning districts for principal buildings, **OR,***

- ii) *be setback a minimum of _____ feet from adjacent residential districts/uses.*

b. *Required fences shall be considered principal structures for purposes of setbacks. Minimum setbacks shall be in accordance with the underlying zoning requirements.*

c. *No side or rear setback will be required where a Solar Energy Project spans across lot lines, provided each landowner has signed a written waiver of the lot line setback.*

5. **Height.**

a. **Ground-Mounted SEFs shall:**

- i) *comply with the building height restrictions for principal buildings of the applicable zoning district, **OR,***

- ii) *comply with the accessory building height restrictions for the applicable zoning district, **OR,***

- iii) *not exceed _____ feet in height.*

b. *All other SEF components shall comply with the underlying district maximum height requirement.*

c. *SEF components may be in excess of the maximum height requirement where the Applicant can demonstrate to the satisfaction of the _____ that the height is a necessity and is beneficial.*

d. *There are no maximum height restrictions for structures that support Solar Facility Connections and Solar Project Connections.*

6. **Stormwater Management.**

a. *Stormwater runoff from a Ground-Mounted SEF shall be managed in accordance with the requirements of the _____ Stormwater Management Ordinance.*

- b. Where Solar Panels are mounted above the ground surface allowing for vegetation below the panels, the horizontal area of the panel may be considered a Disconnected Impervious Area (DIA), and therefore, will have no increase from the pre-development to post-development runoff coefficient (pervious surface). The horizontal area of the panel can only be considered a DIA if the following conditions apply:
- 1) Where natural vegetative cover is preserved and/or restored utilizing low impact protection techniques from the Pennsylvania Department of Environmental Protection Stormwater Best Management Practices Manual, including, but not limited to the following: minimizing the total disturbed area, minimizing soil compaction in disturbed areas, and re-vegetating and re-foresting disturbed areas using native species.
 - 2) Where the vegetative cover has a minimum uniform 70% perennial vegetative cover with a density capable of resisting accelerated erosion and sedimentation.
 - a) For panels located on slopes of 0 to 15% a minimum 4" height of vegetative cover shall be maintained.
 - b) Panels located on slopes greater than 15% cannot be considered a DIA.
 - c) Vegetated areas shall not be subject to chemical fertilization or herbicide/pesticide application, except for those applications necessary to establish the vegetative cover or to prevent invasive species and in accordance with an approved erosion and sedimentation control plan.
 - d) Agrivoltaics may be used provided that:
 - i. only shade tolerant crops are used;
 - ii. a written erosion and sediment control plan is developed for agricultural plowing or tilling activities or a portion of the overall farm conservation plan identifies BMPs used;
 - iii. any grazing, cutting or mowing of the agricultural crop is limited to the accepted best management practice height for that crop;
 - iv. application of chemical fertilization or herbicides/pesticides is limited to the agronomic needs of the crop(s);
 - v. if the property will be used for grazing of livestock, and/or manure application to crop land, a manure management plan must be developed.
 - 3) Where the Solar Panels within a Solar Array are arranged in a fashion that:

- a) allows the passage of runoff between each Solar Panel, thereby minimizing the creation of concentrated runoff; and/or
 - b) allows for the growth of vegetation beneath the panel and between the Solar Arrays.
- c. The horizontal area of a Solar Panel or Solar Array that cannot meet all the conditions to be considered a DIA shall be treated as impervious area. These areas shall be included in the pre-development to post-development runoff analysis as impervious area to determine the need for Post-Construction Stormwater Management (PCSM) best management practices.
- 1) Use of gravel is permissible under a panel or in the receiving downhill flow path; however, the use of gravel would not allow the horizontal area of the Solar Panel or Solar Array to be considered as a DIA.
 - 2) All impervious areas associated with the ASES such as roadways and support buildings cannot be considered as DIAs and shall follow normal protocols when performing the PCSM stormwater analysis.

7. Screening and buffering.

Ground-Mounted SEF shall be screened and buffered in accordance with the following standards:

- a. Vegetative buffering, to the extent practical, shall be installed around the entire perimeter of the SEF installation, except where the municipality determines that the retention of existing trees within the vegetative buffering area may constitute the required vegetative buffer or where the municipality determines that the solar panels cannot be viewed from a public roadway or residential building.
- b. The vegetative buffering shall be installed along the exterior side of the fencing. All required vegetative buffering shall be located within fifty (50) feet of the required fencing.
- c. Vegetative buffering should be designed to emulate the mix of native species and appearance of existing tree lines, hedge rows, and wooded areas already in existence within the landscape where the SEF is proposed. The Applicant shall access the species mix and characteristics found in existing tree lines, hedge rows, and wooded areas surrounding the SEF and document that the vegetative buffering is designed to emulate these characteristics. Arborvitae may be used as vegetative buffering.
- d. No less than 20% of vegetative buffering plantings shall be pollinator friendly species.

- e. Vegetative buffering shall be selected to provide year-round buffering and shall be of sufficient height, density, and maturity to screen the facility from visibility, as set forth herein within thirty-six (36) months of the installation of the SEF.
- f. A combination of natural topography and vegetation can serve as a buffer, provided that the Solar Energy Project (SEP) will not be visible from public roads, public parks or existing residences on surrounding properties. Earthen berms may not be created to serve as a buffer.
- g. The buffering requirements of this section shall supersede the provisions of any municipal zoning or subdivision and land development ordinance as they may pertain to SEFs.

8. Security.

- a. All Ground-Mounted SEFs shall be completely enclosed by fencing that consists of a minimum eight (8) foot high fence with a self-locking gate, or as required by the municipality.
- b. A clearly visible warning sign shall be placed at the base of all pad-mounted transformers and substations and on the fence surrounding the SEF informing individuals of potential voltage hazards.

9. Access.

- a. Stabilized access drives that are maintained in a dust-free condition from a state or township road are required in order to allow maintenance and emergency management vehicles to access the SEF site. The minimum cartway width shall be 14'. The SEF developer shall obtain a permit from the appropriate jurisdiction for the construction of the access road.
- b. At a minimum, a 20' wide cartway shall be provided on the inside of the perimeter fencing between the fence and the Solar Array.
- c. Spacing between Solar Array rows shall allow access for maintenance and emergency vehicles.
- d. Access to the SEF shall comply with the municipal access requirements found in the subdivision and land development ordinance.

10. Lighting.

The Ground-Mounted SEF shall not be artificially lighted except to the extent required for safety or applicable federal, state, or local authorities. Any lighting shall be directed downward so as to minimize negative impacts to adjacent uses.

C. Roof and Wall-Mounted Solar Energy Facilities:

1. The Applicant for a Roof and/or Wall-Mounted SEF shall provide evidence that the plans comply with the Uniform Construction Code, including that the roof or wall is capable of holding the load imposed on the structure.
2. *Height Regulations.*
 - i) *SEFs mounted on roofs of any building shall be subject to the maximum height regulations specified for principal and accessory buildings within the applicable zoning district, **OR,***
 - ii) *The total height of a building with a -SEF shall not exceed by more than _____ foot/feet the maximum building height specified for principal or accessory buildings within the applicable zoning district.*
3. *Roof and Wall-Mounted Solar Energy Facilities are permitted in any zoning district where the building upon which they will be mounted is a permitted use.*

Section 5 - Administration and Enforcement

A. 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 pre-existing 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.
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. An approved land development plan shall accompany all permit applications excluding those for ASES which are accessory to a single-family residential use.

B. 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, reimburse the Municipality 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, zoning officer, building code official and legal fees.

OR,

1. The Applicant shall pay the following fees when seeking approval of a solar energy system:
 - a. Permit Application Fee: \$_____
 - b. Inspection Fee: \$_____
2. The Applicant shall reimburse the Municipality 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, zoning officer, building code official and legal fees.

C. Modifications

The Municipality 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.

D. 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 Municipality’s Superintendent of Public Works, Zoning Officer, Code Enforcement Officer, Solicitor or other representative that may be authorized by the Municipality’s governing body (the “Enforcement Officer”) 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 Municipality 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 Municipality 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 _____ (Municipality) before a District Magistrate, pay a fine of not less than _____ hundred (\$__00.00) nor more than _____ hundred (\$__00.00) dollars, plus all court costs, including reasonable attorneys fee's incurred by _____ (Municipality) 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 Municipality shall also be entitled to recover from any Applicant all the Municipality'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

- A. 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.
- B. It is the intention of the Municipality's governing body 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.

Enacted and Ordained this _____ day of _____ 20____.

Attest: _____ Township

Secretary

By: _____
President/Chair

IF A BOROUGH/CITY

Approved this _____ day of _____ 20____.

Mayor

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Appendix A - Language Solely for Zoning Ordinance Addition

The following section references should be considered as sections to be added to zoning ordinances, as they relate to regulations typically found in zoning ordinances. Additional context may be required to be added to some of the following sections for clarification purposes.

Section 3 - Accessory Solar Energy Systems (ASES):

Section 3.A.1.:

ASES shall be permitted as a use by right in all zoning districts.

Section 3.B.1.:

A Roof-Mounted or Wall-Mounted ASES may be located on a principal or accessory building.

Section 3.B.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 applicable zoning districts, **OR**, the total height of a building with an ASES shall not exceed by more than _____ foot/feet the maximum building height specified for principal or accessory buildings within the applicable zoning district.

Section 3.B.4.:

Wall-Mounted ASES shall comply with the setbacks for principal buildings in the applicable zoning districts, **OR**, Wall-Mounted ASES shall comply with the setbacks for accessory buildings in the applicable zoning districts.

Section 3.B.6.:

Zoning/building permit applications shall document compliance with these provisions.

Section 3.C.1.:

Setbacks.

- a. The minimum setbacks from side and rear property lines shall be equivalent to the accessory building setbacks in the applicable zoning district, **OR**, the minimum setbacks from side and rear property lines shall be equivalent to the principal building setbacks in the applicable zoning district.
- b. A Ground-Mounted ASES shall not be located in the required front setback.
- c. 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, restricted solar access in other yards, other resource constraints, unusual situation of the principal use on the parcel, etc.

Section 3.C.2.:

Height.

Freestanding Ground-Mounted ASES shall not exceed the maximum accessory structure height in the applicable zoning district, **OR**, Ground-Mounted ASES shall not exceed _____ feet in height above the ground elevation surrounding the systems.

Section 4 - Solar Energy Facility (SEF)

Section 4.B.2.d.7):

Setback areas, as defined in the underlying zoning district, except as permitted by Section 4.B.4.c.

Section 4.B.3.:

Minimum Lot Size.

- a. The Ground-Mounted SEF shall meet the lot size requirements of the applicable zoning district, **OR**,
- b. The Ground-Mounted SEF shall not be situated on an individual parcel, or on adjacent, combined lots, smaller than _____ acres/square feet.

Section 4.B.4.:

Setbacks.

- a. Ground-Mounted SEFs shall:
 - i) comply with the setbacks of the applicable zoning districts for principal buildings, **OR**,
 - ii) be setback a minimum of _____ feet from adjacent residential districts/uses.
- b. Required fences shall be considered principal structures for purposes of setbacks. Minimum setbacks shall be in accordance with the underlying zoning requirements.
- c. No side or rear setback will be required where a Solar Energy Project spans across lot lines, provided each landowner has signed a written waiver of the lot line setback.

Section 4.B.5.:

Height.

- a. Ground-Mounted SEFs shall:
 - i) comply with the building height restrictions for principal buildings of the applicable zoning district, **OR**,

- ii) comply with the accessory building height restrictions for the applicable zoning district, **OR**,
 - iii) not exceed _____ feet in height.
- b. All other SEF components shall comply with the underlying district maximum height requirement.
- c. SEF components may be in excess of the maximum height requirement where the Applicant can demonstrate to the satisfaction of the _____ that the height is a necessity and is beneficial.

Section 4.C.2.:

Height Regulations.

- i) SEFs mounted on roofs of any building shall be subject to the maximum height regulations specified for principal and accessory buildings within the applicable zoning district, **OR**,
- ii) The total height of a building with a -SEF shall not exceed by more than _____ foot/feet the maximum building height specified for principal or accessory buildings within the applicable zoning district.

Section 4.C.3.:

Roof and Wall-Mounted Solar Energy Facilities are permitted in any zoning district where the building upon which they will be mounted is a permitted use.