

**Table 3120
Permitted Uses
Zoning District***

General Use	Rural				Suburban			Urban		Preservation
Institutional	AG	RP	CS	RC	E	SE	SM	CR	I	NP
C.2 Principal Solar Energy System	P	S	P	N	N	N	S	P	P	N
P = Permitted by right in this district with a Zoning Permit N = Not permitted in this district S = Permitted in this District only with a Special Exception										

3230C.2 Principal Solar Energy Systems (PSES)

A. Definition

An area of land used for a solar collection system principally to capture solar energy, convert it to electrical energy power and supply electrical 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.

B. Criteria applicable to ALL Solar Energy Facilities (SEF):

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 judgement in light of the facts known at the time a 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.

The application shall include a construction transportation plan that shows ALL roadways that will be utilized to access the site, which will be forwarded to the County or Municipality for review.

DC voltage Solar Array Connections may be located above ground. AC Solar Facility connections should be located above ground where the applicant can demonstrate to the satisfaction of the Zoning Administrator that the overall environmental impacts would support above ground location. Solar Project Connections may be located above ground.

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.

The 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 SEF and provide this number and name to the County. The SEF owner and/or operator shall make reasonable efforts to respond to the public's inquiries and comments.

An Emergency Response Plan shall be included with the SALDO application, which shall be reviewed and approved by Lycoming County Emergency Management Agency

1.) Noise Management

A Noise Management Plan that addresses noise produced during construction and during the facility's operation, to be approved by the Zoning Administrator, shall be included with the Subdivision and Land Development Ordinance (SALDO) application.

The plan, at a minimum, shall address noise during construction and facility operations and include mitigation, an assessment of the noise that will emanate at the perimeter fence and the contact information for the individual 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 not exceed a maximum of 60 dBA during daytime hours and 55 dBA during nighttime hours as measured at the exterior of any occupied building on a non-participating landowner's property. This will supersede Article 5, Division 5130 Noise Protection Levels.

2.) Glare

A completed glare study ensuring that reflective glare is not directed towards, nor upon any adjacent properties as well as any adjacent street rights-of-way. The Glare Study shall include:

- a) Angle of the SEF's panels, arrays, cells, etc. at the location.
- b) A diagram showing the maximum and minimum angles of reflective glare from the SEF's panels, arrays, cells, etc. at the location and the relationship of that glare to adjacent properties, structures and rights-of-way.
- c) A mitigation plan that limits or eliminates reflective glare on adjacent properties, structures and rights-of-way.

All SEF shall be placed such that concentrated solar radiation or glare does not project 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 through mitigation.

3.) Decommissioning:

The SEF owner and/or operator is required to notify the County immediately upon 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. The SEF owner and/or operator shall then 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 other associated facilities in accordance with agreements with landowners and good industry practice. 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. Any soil exposed during the removal shall be stabilized in accordance with applicable erosion and sediment control standards. Any access drive paved aprons from public roads shall remain for future use unless directed otherwise by the landowner.

The SEF site area shall be restored to its pre-existing condition, suitable for its prior use. The landowner may authorize in writing that any buffer landscaping or access roads installed to accommodate the SEF will remain.

Any necessary permits, such as Erosion & Sedimentation and NPDES permits, shall be obtained prior to decommissioning activities.

The developer shall, at the time of SALDO application, provide the County or 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 re-sale value, discounted by a factor of 10%. The decommissioning cost estimate formula shall be:

$$\begin{aligned} & \text{Gross Cost of Decommissioning Activities} \\ & \quad \underline{- 90\% \text{ credit of salvage and re-sale value}} \\ & \quad = \text{the Decommissioning Cost Estimate} \end{aligned}$$

On every 5th anniversary of the date 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 & value changes. If the decommissioning security amount decreases by greater than 10%, the County or Municipality shall release from security any amounts held in excess of 110% of the updated decommission cost estimate. The decommissioning security may be in the form of 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 decommission cost estimate and in a form satisfactory to the County's or Municipality's Zoning administrator and Solicitor.

Prior to final approval of any SALDO plans for the SEF, the SEF developer shall enter into a Decommissioning Agreement with the County or Municipality outlining the responsibility of the parties under this Agreement as to the decommissioning of the SEF.

4.) Permit Requirements:

The SEF shall comply with County or municipality SALDO requirements through submission of a Land Development Plan. The installation of a SEF shall comply with all applicant permit requirements, codes and regulations, including highway occupancy, driveway permits and road bonding requirements. The SEF owner and/or Operator shall repair, maintain and replace the SEF and/or related solar equipment during the term of the permit in a manner consistent with industry standards as needed to keep the SEF in good repair and operating condition.

C. Ground-Mounted Principal Solar Energy Systems (PSES):

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.

1.) Solar Array Locations:

The SEF Development Area may be located only on 50% of the Class I, II and III agricultural soils within the SEF Development Area, unless the area will be devoted to Agrivoltaic activities, in which case, 75% of the Class I, II and III soils may be included in the SEF Development Area. 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, the Class I, II and III agricultural soils, and the portion of the SEF Development Area that may be devoted to Solar Arrays. Solar Arrays shall only be placed within that portion of any lot that lies within the portion of the SEF Development Area that may be devoted to Solar Arrays.

Solar Arrays shall not be located in:

- a) Floodways, as identified in the FEMA FIRM mapping.
- b) Regulated natural and man-made drainage corridors, extending twenty-five (25) ft. from the centerline of any such drainage feature.
- c) Slopes in excess of 15%.
- d) Wooded Areas primarily devoted to mature trees in excess of two (2) acres that would require removal of greater than 20% of mature trees, unless the County or Municipal Zoning Administrator determines greater tree removal would create less impacts to the overall project. If any trees are to be removed, the applicant shall submit a plan demonstrating the need to remove trees and for the replacement of trees. For the purpose of this clause, brushes and shrubs are not to be considered trees.
- e) Legal easements or road rights-of-way.
- f) Setback areas, as defined in the underlying zoning district.
- g) Ground mounted SEFs shall not be placed within any stormwater conveyance system.

2.) Setbacks:

The fence, as required **by Security**, shall be considered a principal structure for purposes of setbacks. Minimum setbacks shall be in accordance with Zoning District requirements. Where a SEF is adjacent to a residential building, a minimum setback of fifty (50) ft. from any occupied building shall be required. No lot line setback will be required where there is a grouping of two or more SEF's which are held by a common owner or leased to a common lessor and which are part of a single solar energy production development project, where each landowner has provided a written waiver of the lot line setback. A minimum of a 25 ft. buffer shall be maintained along either side of any regulated stream or regulatory wetland.

The application shall include with the project submission, details of mitigation measures to be implemented to preserve wildlife corridors including between SEF's of a Solar Energy Project.

3.) Height:

All ground-mounted solar panels shall comply with a maximum fifteen (15) ft. height requirements.

All other SEF components should comply with the underlying district maximum height requirement. SEF components may be in excess of the maximum height requirements where the applicant can demonstrate to the satisfaction of the Zoning Administrator the necessity and benefit. There are no maximum height restrictions for structures that support Solar Facility connections and Solar Project connections.

4.) Stormwater Management:

Stormwater runoff from an SEF shall be managed in accordance with Lycoming County or pertinent Municipal Stormwater Management Ordinance.

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 runoff coefficient. The horizontal area of the panel can only be considered a DIA if the following conditions apply:

- a) Where natural vegetative cover is preserved and/or restored utilizing low impact construction techniques from the Pennsylvania Department of Environmental Protection Stormwater Best 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.
- b) Where the vegetative cover has a minimum uniform 70% perennial vegetative cover with a density capable of resisting accelerated erosion and sedimentation.
- c) For panels located on slopes of 0 to 15%, a minimum 4 inches height of vegetative cover shall be maintained.

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 Plan.

Agrivoltaics may be used provided that:

- d) Only shade tolerant crops may be used
- e) Crops must be “no till”
- f) A written erosion and sedimentation control plan must be developed for agricultural activities or a portion of the overall farm conservation plan must identify BMP’s used
- g) Any grazing, cutting or mowing of the agricultural crop is limited to a height of no less than 4 inches.
- h) Application of chemical fertilizers or herbicides/pesticides is limited to the agronomic needs of the crop(s).
- i) If the property will be used for the grazing of livestock, a manure management plan must be developed.
- j) The Solar Panels within a Solar Array are arranged in a fashion that allows for the growth of vegetation beneath the panel and between the Solar Arrays.

The horizontal area of any Solar Panel or Solar Array that cannot meet all the conditions to be considered 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 Practices. Use of gravel would not allow the horizontal area of the Solar Panel or Solar Array to be considered DIA. All impervious areas associated with the SEF such as roadways and support buildings cannot be considered a DIA and shall follow normal protocols when performing the PCSM stormwater analysis.

5.) 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 Zoning Administrator determines that the retention of existing trees within the vegetative buffering area may constitute the required vegetative buffer or where the Zoning Administrator 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.
- c) All required vegetative buffering shall be located within fifty (50) feet of the required fencing.
- d) Vegetative buffering should be designed to emulate the mix of native species and appearance of existing tree lines, hedgerows and wooded areas already in existence within the landscape where the SEF is proposed
- e) Arborvitae may be used as vegetative buffering.
- f) No less than 20% of vegetative buffering plantings shall be pollinator friendly species.
- g) 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.
- h) A combination of natural topography and vegetation can serve as a buffer provided that the SEF 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.
- i) Vegetative buffering shall be maintained for the life of the SEF.

Visibility of the SEF shall be determined as visible in a photograph taken at a point with a digital camera with an APS-C sensor and a 35mm focal length lens. A SEF shall be considered to not be visible provided that no more than 5% of the SEF shall be visible in accordance with the measure of visibility set forth above. The buffering requirements of this section shall supersede the provisions of the Lycoming County Zoning Ordinance and SALDO as they may pertain to SEFs.

6.) Security:

All ground mounted SEFs shall be completely enclosed by a minimum eight (8) foot high fence with a self-locking gate as deemed appropriate by the Zoning Administrator. 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.

7.) Access:

At a minimum, a 14 foot wide stabilized access road must be provided from a state or municipal roadway to the SEF site that is maintained year round in a dust free condition. The SEF developer shall obtain a permit from the appropriate jurisdiction for the construction of the access road. At a minimum, a 20 foot wide cartway shall be provided on the inside perimeter fencing between the fence and Solar Array. Spacing between Solar Array rows shall allow access for maintenance vehicles and emergency vehicles. Access to the SEF shall comply with the municipal access requirements in the SALDO.

8.) Lighting:

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

9.) Roof and Wall Mounted SEF:

For roof and wall mounted systems, the applicant 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. The total height of a building with a roof and/or wall mounted system shall not exceed by more than three (3) feet above the maximum building height specified for principal or accessory buildings within the applicable zoning district. Roof and wall mounted Principal Solar Energy Facilities are permitted in any zoning district where the building upon which they will be mounted is a permitted use.

Article 10 Division 10300 – Special Exception Procedures

The Lycoming County Zoning Hearing Board may grant special exceptions only for those uses as provided in Table 3120, Table of permitted uses.

ACCESSORY SOLAR ENERGY SYSTEM: An area of land or other area used for a solar energy 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. Ground mounted or freestanding Solar Energy Systems with an output size of not greater than 10kw shall be considered Accessory Solar Energy Systems. Roof Mounted Solar Energy Systems on the roofs of buildings on-site used primarily for on-site use shall have no limit as to power output. 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 for use on-site by the generator.

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, or any successor laws.

COMMISSIONERS/BOARD OF COMMISSIONERS: The Elected Commissioners of Lycoming County.

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 institutions in the amount of 110% of the total proposed decommissioning costs and in a form satisfactory to the Commission and the County Solicitor.

SOLAR ARRAY: A system of a group of solar panels connected together.

SOLAR ARRAY CONNECTION: The low-voltage electric lines which connects Solar Related Equipment.

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 ENERGY FACILITY: 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. 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 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 operation of a Solar Energy Facility or Solar Energy Project. (SEF Developer)

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 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 foundations or other structures used for or intended to be used for collection of solar energy.