

## 7.11 Solar Energy Systems

### 7.11-1 Purpose and Intent

Tompkins Township determines that it is in the public interest to encourage the use and development of renewable energy systems that enhance energy conservation efforts in a safe and efficient manner that is subject to reasonable conditions that will limit adverse impact on nearby properties, environment, and rural character of the region. The Township resolves that the following regulation and standards shall be adopted to ensure that solar energy systems can be constructed within Tompkins Township while protecting public health, safety, and natural resources.

### 7.11-2 Definitions

- A. Accessory Solar Energy System: A small solar energy system which is roof, or building mounted, or architecturally-integrated, or ground mounted panels which are located on a lot or parcel with a principal use such as residence or business designed to supply energy for onsite residential or business use; excess energy produced may be sold back to the grid through net metering or commercial use to generate energy to offset utility costs or as an additional revenue stream. A small solar energy system generates up to but not exceeding 20kW and can occupy, in total, no more than 5% of the property or five (5) acres, whichever is less.
- B. Community Solar Energy System (CSES) (also called "Solar Garden"): A large scale facility that converts sunlight into electricity by photovoltaics (PV) array, for the primary purpose of providing retail electric power (or financial proxy for retail power) to multiple community members or businesses residing or located off-site from the location of the solar energy system. Roof or ground-mounted CSES or Solar Gardens are designed to supply energy for off-site users on the distribution grid. A large scale CSES or Solar Garden system exceeds 20kW, and can occupy, in total, more than five (5) acres.
- C. Solar Farm: A large scale facility that converts sunlight into electricity by photovoltaics (PV) array, for the primary purpose of wholesale sales of generated electricity to the electric transmission grid. A roof or ground-mounted solar farm is the primary land use for the parcel on which it is located. A large scale solar energy system exceeds 20kW, and can occupy, in total, more than five (5) acres.
- D. Solar Collection Panels: Panels and tiles comprised of semiconductor devices and typically referred to as photovoltaic cells, which collect and convert solar energy directly into electricity or solar thermal panels that convert solar energy indirectly to heat a fluid, and can also power solar cooling systems.

### 7.11-3 Permitted Use Standards

Accessory Solar Energy Systems are a small solar energy system designed and used as an accessory use to serve the needs of a home, farm, or small business. Accessory Solar Energy Systems are Accessory Uses in all zoning districts, shall be reviewed by the Zoning Administrator, and are subject to the following standards:

- A. Property Set-Backs: Projects shall follow the district's applicable setbacks of the property's principal use. Ground mounted panel systems shall not be located within a FEMA floodplain or designated wetlands, within forty (40) feet of a riparian shoreline, and/or within three hundred (300) feet of governmental and/or nongovernmental wildlife management areas and scenic trail corridors.
- B. Construction Standards: The owner(s) and/or operator(s) shall submit a site plan and obtain all necessary permits from the Township, and other applicable government agencies.
  - 1) An Accessory Solar Energy System may not occupy more than five (5%) percent of the property or up to five (5) acres whichever is less.
  - 2) All electrical interconnection and distribution lines within the project boundary shall be underground, unless determined otherwise by the planning commission because of severe environmental constraints (e.g. wetlands, hard bedrock), except for wiring between panels in a single solar array, and except for power lines that leave the project or are within the substation. All electrical interconnections and distribution components must comply with all applicable codes and public utility requirements.
- C. Height of ground mounted panels shall not exceed fourteen (14) feet.
- D. Nuisances: Accessory Solar Energy Systems shall not produce glare that is a nuisance to occupants of neighboring properties, or persons traveling neighboring roads, or air routes. Noise produced from Solar Energy Systems shall not exceed above 5dBA (DeciBels Adjusted) of ambient sound levels as measured at the property line. Adequate setbacks shall be provided to comply with these limitations.
- E. Solar Access: Disclaimer- No guarantee of solar easements or solar access are made.

#### 7.11-4 Conditional Use Standards

Community Solar Energy System (CSES) (also called Solar Garden), or Solar Farm are large solar energy systems, designed with the primary use of generating electricity to the electric transmission grid.

The Township Board may adopt an escrow policy by resolution to require that a conditional use applicant or any applicant seeking land use approval be required to pay an escrow deposit to cover the Township's cost in hiring legal, engineering, planning or other professional assistance in reviewing the application.

Community Solar Energy System (CSES) (also called Solar Garden), or Solar Farm will be permitted with conditional use approval in all agricultural, residential (except RMH), commercial, and industrial zoning districts, reviewed by the planning commission, and subject to the following standards:

- A. Large solar energy system projects shall require prior to construction approval, a site assessment study conducted by a private company independent of the project applicant(s) and/ or property owner to determine feasibility including the project's description identifying the size, rated power output, project life, development phases, likely market for the generated energy; visual impact using renditions or photos; analysis of onsite traffic; environmental analysis including soils, wetlands, surface water, woodlots, historical features, review of potential impacts on wildlife, corridor preservation at the site, and mitigation measures.
- B. Nuisances: Large solar energy system projects shall not produce glare that is a nuisance to occupants of neighboring properties or persons traveling neighboring roads or air routes.
- C. Noise produced from large solar energy systems shall not exceed above 5 dBA (DeciBels Adjusted) of ambient sound levels as measured at the property line. Adequate setbacks shall be provided to comply with these limitations.
- D. Property Set-Backs shall follow the district's applicable setbacks of the property's principal use. Ground mounted panel systems shall not be located within a FEMA floodplain or designated wetlands, within forty (40) feet of a riparian shoreline, within fifty (50) of a residential district, and/or within three hundred (300) feet of governmental and/or nongovernmental wildlife management areas, parks, and scenic trail corridors.
- E. Construction Standards: project applicant(s) shall submit a site plan, and obtain all pertinent permits from the Township and other applicable government agencies.
  - 1) The maximum property coverage restrictions shall not apply to photovoltaic solar panels. Any other regulated structures on the property are subject to the maximum lot coverage restrictions of the district.

2) All electrical interconnection and distribution lines within the project boundary shall be underground, unless determined otherwise by the Planning Commission because of severe environmental constraints (e.g. wetlands, hard bedrock), except for wiring between panels in a single solar array, and except for power lines that leave the project or are within the substation. All electrical interconnections and distribution components must comply with all applicable codes and public utility requirements.

3) Lighting at the facility must be shielded to prevent atmospheric light pollution. Light pole(s) shall not exceed eighteen (18) feet.

F. Height of ground mounted photovoltaic solar panel arrays shall not exceed fourteen (14) feet.

G. Landscaping: Ground mounted photovoltaic solar panel arrays shall be screened from view with one (1) row, perimeter planting of native evergreen trees – one eight (8) foot tree every twenty-five (25) feet along road and property lines. The Planning Commission may alter the landscaping requirement depending upon the location and existing plant material on the site.

H. Safety/Access: Perimeter security fencing is required around the Solar Energy facility and all electrical equipment (height and material to be established through the conditional use permit process). Keys or code access shall be provided for emergency personnel.

1) Owner(s) and/or operator(s) shall identify emergency and normal shutdown procedures.

2) Owner(s) and/or operator(s) shall identify potential hazards including solid and hazardous waste, generated by the project to adjacent properties, roadways, and to the community in general, and shall control or eliminate said hazards.

I. Telecommunications Interference: Owner(s) and/or operator(s) shall identify electromagnetic fields and communications interference generated by the project. Adequate setbacks shall be provided to mitigate the interference, at any time the system is in operation.

J. Utilities Interconnection: No grid-connected photovoltaic system shall be installed until the owner(s) and/or operator(s) submit a completed interconnection agreement with the electric utility in whose service territory the large solar energy system is located.

- K. Project Life and Final Reclamation: The owner(s) and/or operator(s) shall submit a decommissioning plan for ground-mounted photovoltaic systems to ensure that the owner(s) and/or operator(s) properly remove the equipment and facilities upon the end of the project life or in the event they are not in use for twelve (12) consecutive months. The plan shall include provisions for the removal of all structures and foundations, the removal of all electrical transmission components, the restoration of soil and vegetation and a soundly-based plan ensuring financial resources will be available to fully decommission the site. The Township may consult with the Township engineer and/or another third party to verify the applicant's estimated decommissioning costs. The Township may require the owner(s) and/or operator(s) to post a bond, letter of credit or other financial guarantee and/or establish an escrow account to ensure proper decommissioning.
- L. Solar Access: Disclaimer - No guarantee of solar easements or solar access are made.