

### SECTION 9.15 GENERAL SOLAR ENERGY SYSTEMS

#### 1. Intent and Purpose.

General solar energy systems come in a variety of sizes and designs. General solar energy systems are typically designed as a single solar panel, or a set of solar panels, which can be either freestanding structures (D2-20) or structurally attached panels. Such panels contain an interconnected assembly of photovoltaic cells, including associated inverters, batteries, and interconnection wiring. This technology harnesses sunlight and converts it into energy which can be used directly on-site.

Because of the variety of available solar energy system designs, the purpose of this section is to establish minimum siting requirements for general solar energy systems in the Township. These requirements balance the development of a clean renewable energy resource while minimizing potential adverse impacts between land uses. The overall intent of this section regulation is to ensure that general solar energy systems are compatible for private use in agricultural, residential, and business settings.

#### 2. General Solar Energy Systems as Accessory Structures.

- a. A general solar energy system shall be considered an accessory structure in all zoning districts and shall not be erected (D2-7), constructed, installed, or modified as provided in this ordinance, including conformance to Section 3.23, unless a zoning permit has been issued to the Owner(s) or Operator(s). A general solar energy system also requires approved mechanical, electrical, and building permits.
- b. An exception to the requirements of Section 3.23 may be granted when a yard (D2-22) has a privacy fence. Yards with a privacy fence may be allowed to install ground-mounted solar panels within the setback area, only when approved by the Zoning Administrator. When the solar panel is directly adjacent to the privacy fence, the height of the solar panel shall not exceed the height of the privacy fence. However, for every 3 feet the solar panel is separated from the privacy fence, the solar panel may have an additional foot of height. In no case shall the ground-mounted solar panel exceed eight 8 feet in height.

#### 3. Siting and Design Requirements.

- a. A general solar energy system exceeding 2 square feet in area is not permitted in any front yard (D2-22), on any face of a building (D2-2) or structure (D2-20) facing a street (D2-18) unless integrated with the construction of said building or structure, or in view of any adjacent street, except roof-mounted solar panels as set forth below.
- b. A general solar energy system is limited to a maximum generating capacity of up to 30 kilowatts (kW) in residential districts and up to 150 kilowatts (kW) in all other zoning

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districts. These limits do not apply to solar energy systems that are integrated into the design of a building or structure, such as, though not limited to, flexible photovoltaic solar cells packaged in the form of roofing shingles.

- c. The reflection angles of solar energy systems should be oriented away from neighboring windows and, to the extent possible, away from public areas, to minimize glare on adjacent properties and roadways. As such, solar panels shall be finished with non-reflective coatings and exposed frames and components shall have a non-reflective surface.
- d. Any power transmission line for a general solar energy system shall be located underground.
- e. If a general solar energy system ceases to perform its intended function for more than twelve (12) consecutive months, the property owner shall remove it and all associated materials, equipment, and facilities no later than ninety (90) days after the end of the twelve (12) month period.
- f. A ground-mounted general solar energy system shall:
  - 1) Be located in a rear yard (*D2-22*) only,
  - 2) Not exceed the allowed maximum lot (*D2-10*) coverage for accessory structures,
  - 3) Not exceed 8 feet in height above the ground.
- g. Roof-mounted general solar energy systems:
  - 1) Permitted roof-mounted solar panels shall include integrated solar panels as the surface layer of the roof structure with no additional apparent change in relief or projection (the preferred installation), or separate flush-mounted solar panels attached to the roof surface. A flush-mounted solar panel is anchored directly against the roof. It is parallel to the surface of the roof and does not stick up and away from the roof.
  - 2) Separate flush-mounted solar panels shall be located on a rear- or side-facing roof, as viewed from any adjacent street (*D2-18*), unless such installation is proven to be ineffective or impossible. The removal of potential obstructions such as interceding vegetation shall not be sufficient cause for permitting a front-facing roof installation.
  - 3) Separate flush-mounted solar panels installed on a building or structure (*D2-20*) with a sloped roof surface shall not project vertically above the peak of the roof to which it is attached, or project vertically more than 5 feet above a flat roof installation.