

## Chapter 174

### SOLAR PANELS

- |  |   |
|--|---|
| § 174-1. Purpose.  | § 174-6. Building-integrated solar/<br>photovoltaic (BIPV) systems. |
| § 174-2. Definitions.  | § 174-7. Ground-mounted racks and<br>freestanding solar collectors. |
| § 174-3. Applicability.  | § 174-8. Small solar panels.  |
| § 174-4. Building permit required;<br>installation requirements. | § 174-9. Solar-thermal energy systems.                              |
| § 174-5. Rooftop and building-mounted<br>solar collectors.       | § 174-10. Safety.   |

[HISTORY: Adopted by the Board of Trustees of the Village of Caledonia 2-6-2018 by L.L. No. 1-2018. Amendments noted where applicable.]

#### GENERAL REFERENCES

Zoning Board of Appeals — See Ch. 49.  
Building Code administration — See Ch. 113.

Zoning — See Ch. 215.

#### § 174-1. Purpose.

The purpose of this chapter is to encourage and promote green energy systems while protecting the health and safety of the residents of the Village of Caledonia by establishing regulations for the installation of small-scale solar energy systems (as herein defined) for residential and commercial purposes

#### § 174-2. Definitions.

As used in this chapter, unless the context requires otherwise, the following terms shall have the meanings indicated:

**BUILDING-INTEGRATED SOLAR/PHOTOVOLTAIC (BIPV) SYSTEM** — A solar energy system incorporated into and becoming part of the overall architecture and design of a building or structure in a manner that the solar energy system is a permanent and integral part of the building envelope or structure.

**GROUND-MOUNTED SOLAR ENERGY SYSTEM** — A solar energy system that has its solar collectors affixed to the ground either directly or by support structures or other mounting devices.

**ROOFTOP-MOUNTED SOLAR ENERGY SYSTEM** — A solar energy system that has its solar collectors installed on the roof or top of a building or principal structure.

**SMALL-SCALE SOLAR ENERGY SYSTEM** — Any solar energy system that:

- A. Is an accessory use or structure, designed and intended to generate energy primarily for a principal use located on site; although, if excess energy is produced, it may be sold to a utility under a net energy metering agreement; and
- B. Consists of an overall area of less than 5,000 square feet of surface area of the solar collector(s).

**SOLAR COLLECTOR** — A solar or photovoltaic cell, plate, panel, film, array, reflector, or other structure affixed to the ground, a building, or other structure that harnesses solar radiation to directly or indirectly generate thermal, chemical, electrical, or other usable energy, or that reflects or concentrates solar radiation to a solar or photovoltaic cell, plate, panel, film, array, reflector, or other structure that directly or indirectly generates thermal, chemical, electrical, or other useable energy.

**SOLAR ENERGY SYSTEM** — A complete system intended for the collection, inversion, storage, and/or distribution of solar energy and that directly or indirectly generates thermal, chemical, electrical, or other useable energy. A solar energy system consists of, but is not limited to, solar collectors, mounting devices or structures, generators/turbines, water and energy storage and distribution systems, storage, maintenance and/or other accessory buildings, inverters, combiner boxes, meters, transformers, and all other mechanical, electrical, and plumbing components.

**SOLAR-THERMAL ENERGY (STE) SYSTEM** — For purposes of this chapter, any system which gathers sunlight and converts it to heat for heating water or air for residential or commercial use, which does not involve the generation of electricity.

### **§ 174-3. Applicability.**

The requirements of this chapter shall apply to all solar energy system installations modified or installed after the effective date of this chapter.

### **§ 174-4. Building permit required; installation requirements.**

- A. Except as otherwise provided herein, building permits shall be required for the installation of all solar energy systems.
- B. Except for small solar panels, all solar energy collectors/systems must be installed according to the manufacturer's instructions and inspected by a licensed electrical inspector.

### **§ 174-5. Rooftop and building-mounted solar collectors.**

- A. Rooftop and building-mounted solar collectors are permitted in all zoning districts pursuant to Chapter 215 of the Village of Caledonia Code and subject to the following conditions set forth in this section.
- B. Height limitations of the Village of Caledonia Zoning Code pursuant to Chapter 215 shall not be applicable to roof-mounted solar energy systems, provided that solar collectors are mounted to such height as is reasonably necessary to accomplish the

purpose for which they are intended to serve and that such structures do not obstruct solar access to neighboring properties.

- C. Roof-mounted solar collectors must have a two foot setback on at least two sides.
- D. Roof- and building-mounted structures must be properly engineered to support collectors. The applicant must provide a signed and sealed certification from a New York State licensed professional engineer containing the following information:
  - (1) Design for mounting scheme appropriately considers "Climatic and Geographic Design Criteria" for the Village of Caledonia in conformance with the New York State Building Code (Chapter 3 of the Residential Code), which are: severe weathering; 90 miles per hour wind zone; 50 pounds/square feet ground snow load; and Seismic Design Category "B."
  - (2) The roof structure is strong enough to support the additional weight of the solar units as per Chapter 16 "dead load" standards of the New York State Building Code.
  - (3) The mounting brackets and hardware and the attachment to the roof will meet or exceed New York State Building Code requirements for the geographic design criteria for the Village of Caledonia
  - (4) Solar collectors are in compliance with Chapter 14 of the New York State Mechanical Code.
  - (5) Solar energy systems used for heating potable water or using an independent medium for heating potable water shall comply with the applicable requirements of the New York State Plumbing Code.
  - (6) The solar energy system is constructed and installed in compliance with Article 690 of the National Electric Code.

**§ 174-6. Building-integrated solar/photovoltaic (BIPV) systems.**

BIPV systems are permitted outright in all zoning districts pursuant to Chapter 215. No additional building permit is required if the system is installed when the structure that the BIPV is part of is constructed.

**§ 174-7. Ground-mounted racks and freestanding solar collectors.**

Ground-mounted and freestanding solar collectors mounted on poles are permitted as accessory structures in all zoning districts pursuant to Chapter 215 of the Village of Caledonia Code, subject to the following conditions:

- A. The location of the solar collectors must meet all applicable setback requirements for accessory structures in the applicable zoning district.
- B. The unit must be installed in a side or rear yard.
- C. No unit shall exceed 15 feet in height from the ground unless an area variance is obtained from the Zoning Board of Appeals.

- D. The Village encourages installations that would employ landscape screening and other methods of enhancing the appeal of the ground-mounted and freestanding solar collector, such as the use of architectural features, earth berms, or other screening which will harmonize with the character of the property and surrounding area.

**§ 174-8. Small solar panels.**

Small solar panels of less than one square yard for charging batteries and powering small instruments or devices shall not require a permit or engineering approval.

**§ 174-9. Solar-thermal energy systems.**

- A. Solar-thermal energy systems are permitted in all zoning districts subject to provision of a certification from a New York State licensed engineer including the information required by § 174-5, above, to the extent applicable.
- B. All units shall be installed according to the manufacturer's specifications.

**§ 174-10. Safety.**

- A. Prior to operation, electrical connections must be inspected by the Code Enforcement Officer and by an electrical inspection person or agency as determined by the Building Inspector in conformance with the State Building Code.
- B. Solar energy systems shall be maintained in good working order and shall be removed if not in use for more than 12 months by removal of such system and mounting hardware within 90 days after the end of the twelfth month.
- C. Rooftop and building-mounted solar collectors shall be designed to be and installed to be in conformance with the New York Uniform Fire Prevention and Building Code standards that are applicable when the building permit is issued.
- D. If solar storage batteries are included as part of the solar collector system, they must be placed in a secure container or enclosure and installed in accordance with manufacturer's specifications and the National Electrical Code.