

New York State Model Solar Zoning Ordinance

U.S. Department of Energy: SunShot Initiative
Rooftop Solar Challenge II

DRAFT

Prepared by
Sustainable CUNY
Release Date: TBD

Sections

Section-1 Purpose

Section-2 Definitions

Section-3 Applicability

Section-4 Solar as an Accessory Use/Structure

Section-5 Solar as a Principal Use (Community Solar, Solar Farms)

Section-6 Historic Districts

Section-7 Abandonment and Removal

Section 1: Purpose

The intentions of this section is to protect the health, safety, and welfare of the [Insert Municipality] by reducing greenhouse gas emissions, supporting distributed energy generation and encouraging economic development.

Section 2: Definitions

Building-Integrated Photovoltaic (BIPV): the incorporation of photovoltaic (PV) material into a building's envelope. Technologies include PV shingles or tiles, PV laminates, and PV glass. Examples of placement include vertical façades, semi-transparent skylights, awnings, fixed awnings, and roofs.

Ground-Mounted System: A solar energy system that is anchored to the ground and attached to a pole or similar mounting system, detached from any other structure.

Large-Scale System: Solar energy systems located on land primarily used to convert solar energy into electricity for offsite energy consumption.

Roof-Mounted System: A solar panel located on a roof of a permitted principle use or accessory structure.

Solar Energy Equipment: Energy storage devices, material, hardware, or electrical equipment and conduit associated with the production of electrical energy.

Solar Energy System: includes a combination of both solar panels and solar energy equipment.

Solar Panel: A device capable of collecting and converting solar energy into electrical energy.

Section 3: Applicability

The requirements of this section shall apply to all solar energy systems installed or modified after the effective date of this ordinance, excluding general maintenance and repair.

Section 4: Solar as an Accessory Use/Structure

Roof-Mounted Systems

Roof-mounted systems are permitted as an accessory use in all zoning districts when attached to lawfully permitted principle uses and accessory structures, subject to the requirements set forth in this section:

- I. *Height:* Solar energy systems shall not exceed maximum height restrictions within any zoning district and are provided the same height exemptions granted to building-mounted mechanical devices or equipment.
- II. *Setback:* Solar energy systems are subject to the setback requirements of the underlying zoning district.
- III. *Aesthetics:* Solar installations shall incorporate the following design requirements:
 - a. Solar energy equipment shall be installed inside walls and attic spaces to reduce their visual impact. If solar energy equipment is visible from a public right of way, it shall match the color scheme of the underlying structure.
 - b. Panels facing the front yard must be mounted at the same angle as the roof's surface with a maximum distance of 18 inches between the roof and highest edge of the system.
 - c. Solar panels affixed to a flat roof shall be placed below the line of sight from a public right of way.

Accessory uses and structures are incidental in nature, and must exist on the same parcel as, and may not exist independently of, a permitted principle use.

If additional standards are necessary, communities have options of adopting specific standards to accessory solar energy systems without requiring discretionary review. This method decreases processing time and allows for specific requirements to be met.

Ground-Mounted Systems

Ground-mounted systems offer an alternative siting location to parcels lacking ideal roof solar access.

To ease potential aesthetic concerns, implementing a graduated setback can reduce the visual impact of ground-mounted installations. The distance of a setback dictates the permissible height of the PV system.

Ground-mounted solar energy systems are permitted as an accessory structure in all zoning districts, subject to the requirements set forth in this section:

- I. All ground-mounted solar panels in residential districts shall be installed in the side yard or rear yard.
- II. *Setback:* Ground-mounted solar panels are subject to setback requirements of the underlying zoning district.
- III. *Height:* Solar panels are restricted to a height of [6ft] when located at a distance of [6-10ft] from a lot line; a height of [12ft] when located at a distance of [11-15ft], and a maximum height of [15ft] when located at a distance of [15ft or greater]. All height measurements are to be calculated when the solar energy system is oriented at maximum tilt. [Reference chart below]

Ground-mounted Height and Setback Requirements	
Setback	Permissible Height
6-10ft	6ft
11-15ft	12ft
15ft or Greater	15ft

- IV. *Lot Coverage:* The surface area of ground-mounted solar panels shall be included in lot coverage and impervious surface calculations.

Section-5 *Solar as a Principal Use*

Large-Scale Solar System

Large-scale solar systems are permitted through the issuance of a special-use permit within *[Insert district(s)]*, in addition to the requirements set forth in this section:

- I. *Height and Setback*: Large-scale solar energy systems shall adhere to the height and setback requirements of the underlying zoning district. Additional restrictions may be imposed during the special-use permit process.
- II. Large-scale systems shall be located on lots with a minimum lot size of *[Insert Size Requirement]* square feet.
- III. All large-scale solar energy systems shall be enclosed by fencing to prevent unauthorized access. Warning signs with the owner's contact information shall be placed on the entrance and perimeter of the fencing. The height and type of fencing shall be determined by the special-use permit process.
- IV. On-site electrical interconnection lines and distribution lines shall be placed underground, unless otherwise required by the utility.
- V. The removal of existing vegetation is limited to the extent necessary for the construction and maintenance of the solar installation.

VI. Special-Use Permit Requirements

- a. Verification of utility notification. Foreseeable infrastructure upgrades shall be documented and submitted. Off-grid systems are exempt from this requirement.
- b. Name, address, and contact information of the applicant, property owner(s), and agent submitting the proposed project.
- c. If the property of the proposed project is to be leased, legal consent between all parties, specifying the use(s) of the land for the duration of the project, including easements and other agreements, shall be submitted.
- d. Site Plan: Site plan approval is required.
- e. Blueprints signed by a Professional Engineer or Registered Architect of the solar installation showing the layout of the system.
- f. The equipment specification sheets shall be documented and submitted for all photovoltaic panels, significant components, mounting systems, and invertors that are to be installed.
- g. Property Operation and Maintenance Plan: A property operation and maintenance plan is required, describing continuing photovoltaic maintenance and property upkeep, such as mowing, trimming, etc.

In lieu of requiring financial surety through bonding, a municipality can place a lien on real property to cover the cost of removal.

(Continued on Next Page)

h. Decommissioning Plan:

- i. To ensure the proper removal of large-scale systems, a decommissioning plan shall be required. The plan shall include the removal of all infrastructures and the remediation of soil and vegetation back to its original state prior to construction, unless otherwise permitted. A cost estimate detailing the projected cost of executing the decommissioning plan shall be prepared by a Professional Engineer or contractor. Cost estimations shall take into account inflation.

[Optional Add-in]

- ii. Financial Surety: A form of surety, through escrow, bond or the equivalency of, shall be established prior to the commencement of construction to cover the cost of decommissioning the site. The amount of surety required by the municipality may not exceed 125 percent of the cost

In lieu of requiring financial surety through a security bond or escrow, a municipality can require financial obligation insurance, or letter of credit from a bank.

Section-6 Solar in Historic Districts

Properties located in a historic district are subject to the requirements set forth in this section:

- I. Solar panels and BIPV systems are permitted by right on accessory structures that do not contribute to the historic significance of the site.

-
- DRAFT
- II. Solar panels shall not alter a historic site's character defining features, or be placed within view of a public right of way.
 - III. All modifications to a historic site must be entirely reversible, allowing alterations to be removed or undone to reveal the original appearance of the site.
 - IV. Exposed solar energy equipment must be consistent with the color scheme of the underlying structure.
 - a. Solar panels shall be placed flush to the roof's surface to reduce their visual impact.
 - b. BIPV shall take into account existing design elements which complement the styles and materials of the building.
 - V. *Setback, Height, and Lot Coverage*- Reference "Section 4-Solar as a Permitted Accessory Use/Structure".
 - VI. The issuance of a Certificate of Appropriateness is required by a historic review committee (i.e. Historic Preservation Commission) for ground-mounted systems, BIPV, and all historic structures.
 - a. Solar panels shall be placed on new construction or additions, if present.
 - b. Ground-mounted systems shall be screened from the public right of way by fencing or vegetation of suitable scale for the district and setting.
-

Section-7 *Abandonment and Removal*

Solar energy systems are considered abandoned after 12 months without electrical energy generation and must be removed from the property.

A violation of any ordinance, rule, or regulation adopted by the *[Insert Regulatory Body, i.e. Town board or City Council]* pursuant to this chapter may be liable for a civil penalty or a term of imprisonment due to violation in accordance with New York State Law.

DRAFT