

## ARTICLE XVI

### **GROUND-MOUNTED SOLAR PHOTOVOLTAIC INSTALLATIONS**

#### 16.01 Purpose

The purpose of this bylaw is to provide the standards for new Ground-Mounted Solar Photovoltaic Installations relative to the placement, design, construction, operation, monitoring, modification and removal of such installations that address public health, welfare or safety, and to minimize impacts on scenic, natural and historic resources.

#### 16.02 Applicability

This bylaw applies to Ground-Mounted Solar Photovoltaic Installations and physical modifications that materially alter the type, configuration, or size of these installations or related equipment.

#### 16.03 Definitions

- A. Solar Photovoltaic Installation: A solar photovoltaic system including all panels and appurtenant structures that is structurally mounted on the ground and is not roof-mounted.
- B. Solar Photovoltaic Installation - Large Scale: A Solar Photovoltaic Installation which occupies an area greater than five-hundred (500) square feet as measured within the perimeter of the installation.

#### 16.04 General Requirements

The following requirements are common to all Solar Photovoltaic Installations to be sited in designated locations.

- A. Compliance with Laws, Ordinances and Regulations: The construction and operation of all Solar Photovoltaic Installations shall be consistent with all applicable local, state and federal requirements, including but not limited to all applicable safety, construction, electrical, and communications requirements. All buildings and fixtures forming part of a Solar Photovoltaic Installation shall be constructed in accordance with the State Building Code.
- B. Special Permit with Site Plan Review: All Solar Photovoltaic Installations shall be subject to site plan review as described in Article IX of the Topsfield Zoning Bylaw. In addition, Solar Photovoltaic Installation - Large Scale shall require a special permit, pursuant to Article V of the Topsfield Zoning Bylaw, by the Planning Board as special permit granting authority prior to construction, installation or modification as provided in this section.

Required Documents: Pursuant to the special permit and site plan review process, the applicant shall provide the following documents in addition to those required under Article IX:

1. A site plan showing:

- a. The Solar Photovoltaic Installation showing the proposed layout of the system and any potential shading from nearby structures. For Special Permit Applications, drawings shall be signed by a Professional Engineer licensed in Massachusetts
  - b. One or three line electrical diagram detailing the Solar Photovoltaic Installation, associated components, and electrical interconnection methods, with all National Electrical Code compliant disconnects and over-current devices;
  - c. Documentation of the major system components to be used, including the panels, mounting system, rated name plate capacity, inverter and interconnection details;
  - d. Name, address, and contact information for proposed system installer and operator;
  - e. Name, address, phone number and signature of the applicant, as well as all co-applicants if any;
  - f. The name, contact information and signature of property owner or co-owner, project developers and co-developers, lessors and agents representing the project applicant.
2. Documentation of actual or prospective access and control of the project site (see also Section 16.04 D);
  3. Proof of liability insurance acceptable to the Planning Board.

The Planning Board may waive documentary requirements as it deems appropriate.

- C. Operation & Maintenance Plan: The applicant for a Solar Photovoltaic Installation – Large Scale shall submit a plan for the operation and maintenance of the Solar Photovoltaic Installation, which shall include measures for maintaining safe access to the installation, storm water controls, as well as general procedures for operational maintenance of the installation.
- D. Utility Notification: No Solar Photovoltaic Installation shall be constructed until evidence has been given to the Planning Board that the utility company that operates the electrical grid where the installation is to be located has been informed of the Solar Photovoltaic Installation owner or operator’s intent to install an interconnected generator and an interconnection agreement and power purchase agreement (where appropriate) has been signed by the utility. Off-grid systems shall be exempt from this requirement.
- E. Dimension and Density Requirements:
  1. Setback and Yard Requirements:
    - a. No Solar Photovoltaic Installation shall be installed in a front yard or within thirty feet of the line of any street or way.
    - b. Solar Photovoltaic Installations shall comply with the Table of Dimensional and Density Regulations with respect to side yard, rear yard and minimum open space, except that Solar Photovoltaic Installations – Large Scale shall have a required side setback of fifty

(50) feet and a required rear setback of fifty (50) feet. The Planning Board may reduce the side and rear setbacks but not to less than those required in the Table of Dimensional and Density Regulations.

2. Height Requirements. Solar Photovoltaic Installations must be no higher than twelve (12) feet.

F. Design Standards:

1. Lighting. Lighting shall be limited to that required for safety and operational purposes, and shall be reasonably shielded from abutting properties. Where feasible, lighting of the Solar Photovoltaic Installation shall be directed downward and shall incorporate full cut-off fixtures to reduce light pollution.
2. Signage. A sign for all Solar Photovoltaic Installations – Large Scale consistent with the Town’s sign bylaw shall be required to identify the owner and provide the business name for the company (ies) that own and operate the installation, their business address, the name of a contact person, and a 24-hour emergency contact phone number.
3. Utility Connections. Reasonable efforts, as determined by the Planning Board, shall be made to place cabling and utility connections from the Solar Photovoltaic Installation underground, depending on appropriate soil conditions, shape, and topography of the site and any requirements of the utility provider.
4. Conditions. All appurtenant structures, including but not limited to, equipment shelters, storage facilities, transformers, and substations, shall be architecturally compatible with each other. Structures shall be screened from view by vegetation or fencing.

G. Safety and Environmental Standards:

1. Emergency Services. The Solar Photovoltaic Installation – Large scale owner or operator shall provide a copy of the project summary, electrical schematic, and site plan to the Topsfield Fire Chief. The owner or operator shall cooperate with local emergency services in developing an emergency response plan. All means of shutting down the Solar Photovoltaic Installation shall be clearly marked. The owner or operator shall identify a responsible person for public inquiries throughout the life of the installation.
2. Land Clearing, Soil Erosion and Habitat Impacts. Clearing of natural vegetation shall be limited to what is necessary for the construction, operation and maintenance of the Solar Photovoltaic Installation and in accordance with applicable laws, regulations, and bylaws including but not limited to the Conservation Bylaw, the Stormwater Management and Erosion Control Bylaw and the Soil Removal Bylaw.

- H. Maintenance: The Solar Photovoltaic Installation owner or operator shall maintain the facility in good condition. Maintenance shall include, but not be limited to, painting, structural repairs, and integrity of security and safety measures. Site access for Solar

Photovoltaic Installation – Large Scale shall be maintained to a level acceptable to the Topsfield Fire Chief.

I. Modifications: All material modifications to a Solar Photovoltaic Installation made after issuance of the required building permit shall require approval by the Planning Board.

J. Abandonment or Decommissioning:

1. Removal Requirements. Any Solar Photovoltaic Installation which has reached the end of its useful life or has been abandoned consistent with Section 16.04 L. 2. of this bylaw shall be removed. The owner or operator shall physically remove the installation no more than 150 days after the date of discontinued operations. The owner or operator shall notify the Planning Board by certified mail of the proposed date of discontinued operations and plans for removal. Decommissioning shall consist of:

G. Physical removal of all Solar Photovoltaic Installations, structures, equipment, security barriers and transmission lines from the site.

H. Disposal of all solid and hazardous waste shall be in accordance with local, state, and federal regulations.

I. Stabilization or re-vegetation of the site as necessary to minimize erosion. The Planning Board may allow the owner or operator to leave landscaping or designated below-grade foundations in place in order to minimize erosion and disruption to vegetation.

2. Abandonment: Absent notice to the Planning Board as provided above of a proposed date of decommissioning or written notice requesting an extension due to extenuating circumstances, the Solar Photovoltaic Installation shall be considered abandoned when it fails to operate or its operations are discontinued for more than one year without the written consent of the Planning Board; or if the Building Inspector has determined that the installation is a hazard to public safety and the conditions have not been corrected within six (6) months.

The Town retains the right, after the receipt of an appropriate court order to enter and remove an abandoned or hazardous Solar Photovoltaic Installation that is not removed by the property owner within six (6) months from the date of abandonment, as described above, or the proposed date of decommissioning. As a condition of approval, an applicant shall agree to allow entry to remove an abandoned installation. The costs for the removal will be charged to the property owner in accordance with the provisions of M.G.L. 139, Section 3A as a tax lien on the property.

#### 16.05 Severability

All the clauses of this bylaw are distinct and severable, and if any clause shall be deemed illegal, void, or unenforceable, it shall not affect the validity, legality, or enforceability of any other clause or portion of this bylaw. (Art. 28, 5/3/2011; Art. 44, 5/7/2014)