

## Section 8.5 Ayer Solar Energy Systems Overlay District Bylaw

### 8.5 Solar Energy Systems

#### 8.5.1 Intent and Purpose

The purpose of the Ayer Solar Energy Systems Bylaw (hereafter ‘the bylaw’) is to provide for the construction and operation of solar energy systems and to establish standards for the placement, design, construction, monitoring, modification and removal of solar energy systems that address public safety, minimize impacts on scenic, natural and historic resources of the Town, and provide adequate financial assurance for decommissioning. The provisions set forth in this section shall take precedence over all other sections of the Ayer Zoning Bylaws when considering applications related to the construction, operation and/or repair of solar energy systems.

#### 8.5.2 Establishment

The Ayer Solar Energy Systems Overlay District is adopted pursuant to MGL Chapter 40A. This bylaw applies to the installation, siting and approval of solar energy systems within the various zoning districts of the Town.

#### 8.5.3 Definitions

Accessory Use: A use of a lot that is secondary or supportive of the principal use. For example, a small ground-mounted solar system is accessory to the primary use of a lot, which in many cases is residential, commercial or industrial.

Municipal Solar Systems: A solar energy system owned and operated by the Town of Ayer or an agent of the Town, the electricity which is generated therefrom to be used by the Town or the general public.

Photovoltaic System (also referred to as Photovoltaic Installation): An active solar energy system that converts solar energy directly into electricity.

Principal Use: The primary use of a lot, whether it be for solar energy production, residential, commercial, industrial or other uses.

Rated Nameplate Capacity: The maximum rated output of electric power production of the photovoltaic system in watts of Direct Current (DC).

Solar Collector: A device, structure or a part of a device or structure for which the primary purpose is to transform solar radiant energy into thermal, mechanical, chemical, or electrical energy.

Solar Energy: Radiant energy received from the sun that can be collected in the form of heat or light by a solar collector.

Solar Energy System: A device or structural design feature, a substantial purpose of which is to provide daylight for interior lighting or provide for the collection, storage and distribution of solar energy for space heating or cooling, electricity generation, or water heating.

Solar Energy System, Active: A solar energy system whose primary purpose is to harvest energy by transforming solar energy into another form of energy or transferring heat from a collector to another medium using mechanical, electrical, or chemical means.

Solar Energy System, Ground-Mounted: An Active Solar Energy System that is structurally mounted to the ground and is not roof-mounted; may be of any size (small-, medium- or large-scale).

Solar Energy System, Large-Scale: An Active Solar Energy System that occupies 40,000 or more square feet of area; and/or generates more than 250 kW of DC.

Solar Energy System, Medium-Scale: An Active Solar Energy System that occupies more than 1,750 but less than 40,000 square feet of area; and/or generates between 10 – 250 kW DC.

Solar Energy System, Roof-Mounted: An Active Solar Energy System that is structurally mounted to the roof of a building or structure; may be of any size (small-, medium- or large-scale).

Solar Energy System, Small-Scale: An Active Solar Energy System that occupies 1,750 sq.ft. or less of area; and/or generates less than 10 kW DC.

Solar Hot Water: A solar energy system, usually roof-mounted, designed for the purpose of heating water for domestic or commercial uses inside a building.

#### 8.5.4 Authority

The Planning Board shall act as the administering authority for any Site Plan Review procedure associated with this bylaw according to Section 3.5 of the Ayer Zoning Bylaw. The Planning Board shall also serve as the Special Permit Granting Authority for any use that requires a Special Permit under the terms of this bylaw.

#### 8.5.5 Solar Energy Use Provisions

The following table of uses describes what type of solar energy systems are allowed by right (Y) with issuance of a building permit, allowed through site plan review (SI), allowed by Special Permit *with* Site Plan review (SP), or prohibited (N) in each of Ayer's nine (9) major zoning districts. Descriptions of what constitutes roof mounted, small-scale ground, medium-scale ground, and large-scale ground systems are found in the Definitions section of this bylaw. Small and medium-scale roof-mounted systems are permitted by right in all zoning districts.

<b>Principal Use</b>	<b>A1</b>	<b>A2</b>	<b>GR</b>	<b>DB</b>	<b>MUT</b>	<b>GB</b>	<b>LI</b>	<b>I</b>	<b>HCS</b>
Small-Scale Ground Mounted	Y	Y	SI	SI	SI	Y	Y	Y	Y
Medium-Scale Ground Mounted	N	N	N	N	SP	SI	SI	Y	SI
Large-Scale Ground Mounted	N	N	N	N	N	SP	SI	SI	SP
<b>Accessory Use</b>	<b>A1</b>	<b>A2</b>	<b>GR</b>	<b>DB</b>	<b>MUT</b>	<b>GB</b>	<b>LI</b>	<b>I</b>	<b>HCS</b>
Roof-Mounted	Y	Y	Y	Y	Y	Y	Y	Y	Y
Small-Scale Ground Mounted	Y	Y	SI	SI	SP	Y	Y	Y	Y
Medium-Scale Ground Mounted	SP	SP	N	N	SP	SI	Y	Y	Y
Large-Scale Ground Mounted	N	N	N	N	N	SP	SI	SI	SP

Y = Permitted By-Right with building permit

SI = Requires Site Plan review and approval

SP = Requires Special Permit *and* Site Plan review – The Planning Board is the special permit granting authority

N = Prohibited

\* Roof mounted systems to serve an individual residential, commercial or industrial structure. They include solar hot water as well as PV systems.

##### 8.5.5.1 Municipal Solar Energy Systems

Notwithstanding the Solar Energy Use Provisions found in Section 8.5.5 above, solar energy systems, whether ground-mounted or roof-mounted, of any scale, may be installed as of right on municipally-owned or leased property in all zoning districts. Ground-mounted solar energy systems on municipally-owned or leased land require site plan review.

The same dimensional, design and general requirements that apply to privately installed and operated solar energy systems shall apply to solar energy systems installed on municipally-owned property.

## 8.5.6 Dimensional, Design and General Requirements

### 8.5.6.1 General Requirements for all solar energy systems

The following requirements are common to all solar energy systems:

8.5.6.1.1 Compliance with laws: The construction and operation of all proposed solar energy systems shall be consistent with all applicable local, state and federal requirements, including but not limited to all applicable safety, construction, environmental, electrical, communications and aviation requirements.

8.5.6.1.2 Construction Deadlines. If the solar energy system is not installed and functioning within 24 months from the date the building permit is issued, the solar energy system is considered abandoned unless an extension of the special permit has been approved.

8.5.6.1.3 System conditions: Owners of solar energy systems shall be responsible for maintaining them in good condition. Maintenance shall include, but not be limited to, structural repairs and integrity of security measures. Site access shall be maintained to a level acceptable to the local Fire Chief and Emergency Services. The project owner shall be responsible for the cost of maintaining the solar energy system and any access road(s), and the cost of repairing any damage occurring as a result of operation and construction.

8.5.6.1.4 Modifications: All material modifications, including but not limited to alterations to the type, size, location or configuration of a solar energy system, made after issuance of any approval issued pursuant to this bylaw shall require approval by the Planning Board as provided in this bylaw.

### 8.5.6.2 Roof Mounted Solar Energy Systems

8.5.6.2.1 Roof mounted solar energy systems shall not be erected, constructed, installed or modified without first obtaining a building permit from the Ayer Building Inspector.

8.5.6.2.2 Roof mounted solar energy systems that are not flush mounted to an existing roof but are "slanted or tilted" to meet desired angles must not exceed the overall building height limits of the underlying district. The height shall be measured to the highest protruding point of the solar system at its fullest extension.

### 8.5.6.3 Small and Medium Scale Ground Mounted Systems

8.5.6.3.1 Small and medium scale ground-mounted solar energy systems shall not be erected, constructed, installed or modified as provided in this section without first obtaining a building permit from the Ayer Building Inspector.

9.9.6.3.2 Small and medium scale ground-mounted solar energy systems shall meet the setbacks for buildings from all property lines in the district in which they are located.

9.9.6.3.3 All small and medium scale ground-mounted solar energy systems in residential districts shall be installed either in the side yard or rear yard.

9.9.6.3.4 All medium-scale ground mounted solar energy systems shall not increase stormwater runoff or increase the impervious area of a lot as compared to pre-development levels.

9.9.6.3.5 Whenever possible, utility lines for medium-scale ground-mounted systems shall be located underground unless the presence of ledge and/or wetlands or other obstacles prevents such location.

#### 8.5.6.4 Large-Scale Ground Mounted Systems

8.5.6.4.1 Large-scale ground mounted solar energy systems shall adhere to the same setbacks as are required for principal buildings in the underlying Ayer zoning districts.

8.5.6.4.2 Whenever possible, utility lines for large-scale ground-mounted systems shall be located underground unless the presence of ledge and/or wetlands or other obstacles prevents such location.

8.5.6.4.3 Siting Criteria for large-scale ground mounted solar energy systems:

Large-scale ground mounted solar energy systems shall be located so as to minimize the potential impacts on the following:

- a. Visual/aesthetic: Large-Scale Solar Energy Systems shall, when possible, be sited off ridgelines to locations where their visual impact is least detrimental to valuable historic and scenic areas, and established residential areas;
- b. General health, safety, and welfare of residents;
- c. Natural habitats, forests and wetlands;
- d. Lands with prime agricultural soils;
- e. Glare from the solar panels onto any abutting or nearby properties;
- f. Potential vehicular traffic conflicts; and
- g. Diminution of residential property values;

#### 8.5.7 Planning Board Action / Findings

The Ayer Planning Board may approve solar energy systems requiring either site plan approval and/or a special permit subject to the applicable general Site Plan Review Criteria, found in Section 3.5.4 of the Ayer Zoning Bylaw; as well as satisfactorily meeting the siting criteria of section 8.5.6.4.3 of this section in the case of large-scale ground mounted solar energy systems.

#### 8.5.8 Regulations

After public notice and public hearing, the Ayer Planning Board may promulgate regulations to achieve the purposes and assist in the implementation of this bylaw. Such regulations will be added to Ayer's Rules and Regulations for Site Plan review.

Failure to promulgate such regulations, or the invalidation by a court of law of one or more of such regulations, shall not act to suspend or invalidate any provision of this bylaw.

#### 8.5.9. Plan Submittal Requirements.

Plan submittal requirements are specified in the accompanying solar energy systems regulations as adopted by the Ayer Planning Board.

#### 8.5.10 Site Plan Review

The site plan review standards for solar energy projects in Ayer are found in the Town of Ayer Rules and Regulations for Site Plan Approval and in Section 3.5.4 of the Ayer Zoning Bylaws.

#### 8.5.11 Special Permits

Applicants for medium and large-scale ground mounted solar energy systems requiring a Special Permit pursuant to section 8.5.5 of this bylaw, shall adhere to the Special Permit criteria and procedures found in section 3.4 of the Ayer Zoning Bylaws and the requirements for Site Plans as referenced in Section 8.5.10 above.

8.5.11.1 Expiration. A special permit issued pursuant to this bylaw shall expire if: i) the solar energy system is not installed and functioning within 24 months from the date the permit is issued; or ii) the solar energy system is abandoned. The Ayer Planning Board may extend the special permit if it deems there are unique circumstances that justify a delay in the installation and/or functioning of the solar energy system.

#### 8.5.12 Operation, Monitoring and Maintenance

These operation, monitoring and maintenance requirements shall apply to medium-scale and large-scale ground mounted solar energy systems developed as the principal use of a lot.

8.5.12.1 Facility Conditions. The medium-scale or large-scale ground mounted solar energy systems owner or operator shall maintain the facility in good condition. Maintenance shall address all elements of the project, including but not limited to, structural repairs, landscaping and screening, fencing and other security measures, stormwater management, and access. The project owner shall be responsible for the cost of maintaining the solar energy system and any access road(s), and the cost of repairing any damage occurring as a result of operation and construction.

8.5.12.2 Operation and Maintenance Plan. The project applicant shall submit a plan for the operation and maintenance of the large-scale solar energy system as part of the special permit application. This plan shall include measures for maintaining safe access to the installation, stormwater management control, and general procedures for operational maintenance of the facility.

8.5.12.3 Modifications. All material modifications to a solar energy facility made after issuance of the permit shall require approval by the special permit granting authority as provided in this bylaw.

#### 8.5.13 Abandonment and Decommissioning

These abandonment and decommissioning requirements shall apply to medium-scale and large-scale ground mounted solar energy systems developed as the principal use of a lot.

8.5.13.1 Removal requirements. Any medium-scale or large-scale ground mounted solar energy system which has reached the end of its useful life or has been abandoned shall be removed. When the solar energy system is scheduled to be decommissioned, the owner or operator shall notify the Town by certified mail of the proposed date of discontinued operations and plans for removal. The owner/operator shall physically remove the solar system installation no more than 150 days after the date of discontinued operations. At the time of removal, the solar system site shall be restored to the state it was in before the system was constructed or to any other legally authorized use, subject to all Town approvals.

More specifically, decommissioning shall consist of the following:

- a. Physical removal of all solar photovoltaic installations, including structures, equipment, security barriers, and transmission lines from the site;
- b. Any utility connections shall be disconnected to the satisfaction of the Ayer Fire Department and the Town's Wiring Inspector;
- c. Disposal of all solid and hazardous waste in accordance with local and state waste disposal regulations and standards; and
- d. Stabilization or re-vegetation of the site as necessary to minimize erosion. The Planning Board may allow the owner/operator to leave landscaping or any designated below-grade foundations in order to minimize erosion and disruption to vegetation.

8.5.13.2 Abandonment. Absent notice of a proposed date of decommissioning or written notice of extenuating circumstances, a large-scale ground mounted solar energy system shall be considered abandoned when it ceases to operate for more than twelve (12) months, without written consent of the Planning Board. "Cease to operate" is defined as not performing the normal functions associated with the large-scale solar energy system and its equipment on a continuous and ongoing basis for a period of one year. The Planning Board shall provide written notification of abandonment to the owner/operator.

If the owner/operator fails to remove the solar energy system in accordance with the requirements of this section within 150 days of abandonment or the proposed date of decommissioning, the Town shall have the authority to enter the property, to the extent it is duly authorize by law, and physically remove the solar energy system.

8.5.13.3 Financial Surety Applicants for principal-use medium-scale and large-scale ground-mounted solar energy system projects shall provide a form of surety to cover the cost of removal in the event the town must remove the installation and remediate the landscape, in an amount determined to be reasonable by the Ayer Planning Board and the applicant.

The applicant may choose to provide the surety in the form of a bond or escrow account. In no event shall the amount exceed more than 125 percent of the cost of removal and compliance with the additional requirements set forth herein, as determined by the applicant and the Ayer Planning Board. Such surety will not be required for municipally- or state-owned facilities. The applicant shall submit a fully inclusive estimate of the costs associated with removal, prepared by a qualified engineer. The estimated cost of removal shall include a mechanism for calculating increased removal costs due to inflation.

#### 8.5.14 Severability

If any section or provision of this bylaw is held invalid by a court of competent jurisdiction, the remainder of the bylaw shall not be affected thereby.

#### 8.5.15 Conflict with Other Laws

All development activities undertaken through this solar energy systems bylaw shall comply with all applicable laws, regulations, and standards of the Town of Ayer. In the event of a conflict between this bylaw and any section of the zoning bylaw the provisions of this section shall control, provided it is consistent with state and federal law.