

46.2 Large-Scale Ground Mounted Solar Photovoltaic Facilities

A. Purpose

The purpose of this bylaw is to promote and regulate the use of commercial and municipal solar photovoltaic facilities within the Town of Dover and encourage their location and use in a manner which minimizes negative visual and environmental impacts on scenic, natural and historic by providing standards for the placement, design, construction, operation, monitoring, modification and removal of such installations. The purpose is also to address public safety and to provide adequate financial assurance for the eventual decommissioning of such installations.

The provisions set forth in this section shall apply to the construction, operation, and/or repair of large-scale ground-mounted solar photovoltaic installations. This section also pertains to physical modifications that materially alter the type, configuration, or size of these installations or related equipment. This provision does not apply to the construction or use of any solar energy systems or the building of structures that facilitate the collection of solar energy, as exempted by M.G.L. Chapter 40A, Section 3.

B. Definitions

As-of-Right Siting: As-of-Right Siting shall mean that development may proceed without the need for a special permit, variance, amendment, waiver, or other discretionary approval. As-of-right development may be subject to site plan review.

Appurtenant Facilities. A system of wires or conductors and supporting structures that functions in the transmission of electrical energy or communication services (both audio and video) between generating stations, sub-stations, and transmission lines, or otherwise supports the functioning of the solar photovoltaic installation.

Large-Scale Ground-Mounted Solar Photovoltaic Installation: A solar photovoltaic system that is structurally mounted on the ground and is not roof-mounted, and has a minimum rated nameplate capacity of 250 kW DC.

On-Site Solar Photovoltaic Installation: A solar photovoltaic installation that is constructed at a location where other uses of the underlying property occur.

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

Related Equipment or Facilities. Any equipment, building, structure, access way, landscaping or other means used to support the operation, of a solar photovoltaic installation.

Security Barrier. A locked, impenetrable wall, fence or berm, or combination thereof, which completely seals an area from unauthorized entry or trespass.

C. Solar Photovoltaic Overlay District

In order to allow new solar photovoltaic facilities to be located efficiently and in areas that will have the least visual and environmental impact, there is hereby created the following Solar Photovoltaic Overlay District (SPOD):

This District shall include all land within the parcels shown on Assessors Map 19, Parcels 002, 004A and that portion of Parcel 004 that is north of the natural gas pipeline easement.. Said location is shown on a Zoning Map entitled Solar Photovoltaic Overlay District, pursuant to Massachusetts General Laws Chapter 40A Section 4. This map is hereby made a part of this Zoning Bylaw and is on file in the Office of the Town Clerk.

D. General Requirements for all Large Scale Solar Power Generation Installations

(1) Compliance with Laws, Ordinances and Regulations

The construction and operation of all large scale 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.

(2) Site Plan Review

Ground-mounted large scale solar photovoltaic installations with 250 kW or larger of rated nameplate capacity shall undergo site plan review by the Planning Board in accordance with Section 185-46.1 prior to construction, installation or modification as provided in this section. The Planning Board shall provide the Board of Selectmen, the Long-Range Planning Committee, the Superintendent of Streets, and the Building Inspector with copies of the site plan application and request their review and written comment on such application. Any such comments and recommendations received in writing by the Planning Board within 30 days of providing the site plan application shall be considered in determining whether to approve a site plan.

(3) General

All plans and maps shall be prepared, stamped and signed by a Professional Engineer licensed to practice in Massachusetts.

(4) Required Documents

Pursuant to the site plan review process, the project applicant shall provide the following:

- (a)** A site plan showing:
 - i.** Property lines and physical features, including roads, for the project site;
 - ii.** Proposed changes to the landscape of the site, grading, vegetation clearing and planting, exterior lighting, screening vegetation or structures;
 - iii.** Blueprints or drawings of the solar photovoltaic installation signed by a Professional Engineer licensed to practice in the Commonwealth of Massachusetts showing the proposed layout of the system and any potential shading from nearby structures
 - iv.** 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 overcurrent devices;
 - v.** Documentation of the major system components to be used, including the PV panels, mounting system, and inverter;
 - vi.** Name, address, and contact information for proposed system installer;
 - vii.** Name, address, phone number and signature of the project applicant, as well as all co-applicants or property owners, if any;
 - viii.** The name, contact information and signature of any agents representing the project applicant; and
- (b)** Documentation of actual or prospective access and control of the project site (see also Section (5));
- (c)** An operation and maintenance plan (see also Section (6));
- (d)** Zoning district designation for the parcel(s) of land comprising the project site (submission of a copy of a zoning map with the parcel(s) identified is suitable for this purpose);
- (e)** Proof of liability insurance; and
- (f)** A public outreach plan, including a project development timeline, which indicates how the project applicant will inform abutters and the community about the project.

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

(5) Site Control

The project applicant shall submit documentation of actual or prospective access and control of the project site sufficient to allow for construction and operation of the proposed solar photovoltaic installation.

(6) Operation & Maintenance Plan

The project applicant shall submit a plan for the operation and maintenance of the large scale ground-mounted 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, including both functional and aesthetic aspects of the site.

(7) Utility Notification

No large scale ground –mounted 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 customer-owned generator. Off-grid systems shall be exempt from this requirement.

(8) Dimension and Density Requirements

(a) Setbacks

For large - scale ground-mounted solar photovoltaic installations, front, side and rear setbacks shall be 40 feet.

(b) Appurtenant Structures

All appurtenant structures to large- scale ground-mounted solar photovoltaic installations shall be subject to applicable regulations concerning the bulk and height of structures, lot area, setbacks, open space, parking and building coverage requirements. All such appurtenant structures, including but not limited to, equipment shelters, storage facilities, transformers, and substations, shall be architecturally compatible with each other. Whenever reasonable, structures should be screened from view by vegetation and/or joined or clustered to avoid adverse visual impacts.

(9) Design Standards

(a) Lighting

Lighting of solar photovoltaic installations shall be consistent with local, state and federal law. Lighting shall be limited to that required for safety and operational purposes, and shall be shielded from abutting properties. Lighting of the solar photovoltaic installation and site shall be directed downward and shall incorporate full cut-off fixtures to reduce light pollution.

(b) Signage

Signs on large- scale ground-mounted solar photovoltaic installations shall comply with the sign bylaw and sign regulations. A sign consistent with the sign bylaw shall be required to identify the owner and provide a 24-hour emergency contact phone number.

Solar photovoltaic installations shall not be used for displaying any advertising except for reasonable identification of the manufacturer or operator of the solar photovoltaic installation.

(c) Utility Connections

Reasonable efforts, as determined by the Planning Board during site plan review, shall be made to place all 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. Electrical transformers for utility interconnections may be above ground if required by the utility provider.

(10) Safety and Environmental Standards

(a) Emergency Services

The large scale solar photovoltaic installation owner or operator shall provide a copy of the project summary, electrical schematic, and site plan to the local fire chief. Upon request 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.

(b) 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 large – scale ground-mounted solar photovoltaic installation or otherwise prescribed by applicable laws, regulations, and bylaws.

(11) Monitoring and Maintenance

(a) Solar Photovoltaic Installation Conditions

The large - scale ground-mounted solar photovoltaic installation owner or operator shall maintain the facility in good condition. Maintenance shall include, but not be limited to, painting, structural repairs, site landscaping and integrity of security measures. Site access shall be maintained to a level acceptable to the Fire Chief and Emergency Medical Services. The owner or operator shall be responsible for the cost of maintaining the solar photovoltaic installation and any access road(s), unless accepted as a public way.

(b) Modifications

All material modifications to a solar photovoltaic installation made after issuance of the required building permit shall require approval by the Planning Board as a modification of the site plan.

(12) Abandonment or Decommissioning

(a) Removal Requirements

Any large- scale ground-mounted solar photovoltaic installation which has reached the end of its useful life or has been abandoned consistent with Section D (12) (b) 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:

- (i)** Physical removal of all large- scale ground-mounted solar photovoltaic installations, structures, equipment, security barriers and transmission lines from the site.
- (ii)** Disposal of all solid and hazardous waste in accordance with local, state, and federal waste disposal regulations.
- (iii)** 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 order to minimize erosion and disruption to vegetation, but otherwise the site shall be restored as nearly as possible to its original condition.

A performance guarantee running to the Town of Dover, secured by surety or by money or negotiable securities deposited with the Town Treasurer in such amounts as the Board shall determine to be sufficient to cover the cost of Items i, ii and iii above, shall be required as a condition of site plan approval. The performance guarantee shall be executed and provided to the Town prior to the issuance of any building permit for the site.

(b) Abandonment

Absent notice of a proposed date of decommissioning or written notice of extenuating circumstances, the solar photovoltaic installation shall be considered abandoned when it fails to operate for more than one year without the written consent of the Planning Board.