

Town of Millis Large-Scale Ground-Mounted Solar Photovoltaic Installations
Zoning By-law Warrant Article

To see if the Town will vote to amend the Zoning Bylaws, as most recently amended, by amending the various sections identified herein as follows, or to take any other action related thereto:

By amending Section V, Use Regulations, Table 1, Use Regulations, by inserting a new Principal Use #20 for “Large-Scale Ground-Mounted Solar Photovoltaic Installations with Rated Nameplate Capacity of 250 Kw DC or more” under the heading “Wholesale, Transportation & Industrial” and by inserting in the columns for the various Zoning Districts that such use is allowed by right, by special permit or prohibited as follows:

	R-T	R-S	R-V	R-V-C	C-V	C-V-2	V-B	I-P	I-P-2
20. Large-Scale Ground-Mounted Solar Photovoltaic Installations with Rated Nameplate Capacity of 250 Kw DC or more.	N	N	N	N	N	N	N	P	P

And by adding a new Section XXI - Large-Scale Ground-Mounted Solar Photovoltaic Installations as follows:

Section XXI - Large-Scale Ground-Mounted Solar Photovoltaic Installations

1. Purpose:

The purpose of this Bylaw is to promote the creation of new Large-Scale Ground-Mounted Solar Photovoltaic Installations by providing standards for the placement, design, construction, operation, monitoring, modification and removal of such installations that address public safety, minimize impacts on scenic, natural and historic resources 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.

2. Applicability:

This section applies to Large-Scale Ground-Mounted Solar Photovoltaic Installations (LGSPI) proposed to be constructed after the effective date of this section. This section also pertains to physical modifications that materially alter the type, configuration, or size of these installations or related equipment.

The provisions set forth in this Section shall apply to the construction, operation and/or repair of Large-Scale Ground-Mounted Solar Photovoltaic Installations with a Rated Nameplate Capacity of from 250 kW DC or more.

3. **Definitions:**

The following definitions shall apply:

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 to determine conformance with local zoning bylaws. Projects cannot be prohibited, but can be reasonably regulated by the Building Inspector and the Planning Board.

Building Permit: A construction permit issued by an authorized building inspector; the building permit evidences that the project is consistent with the state and federal building codes as well as local zoning bylaws, including those governing ground-mounted large-scale solar photovoltaic installations.

Designated Location: The location(s) designated herein where Large-Scale Ground-Mounted Solar Photovoltaic Installations with a Rated Nameplate Capacity of 250kW or more may be sited As-of-Right in the I-P and I-P-2 Districts as shown on the Town of Millis zoning maps.

Large-Scale Ground-Mounted Solar Photovoltaic Installation (LGSPI): A solar photovoltaic system that is structurally mounted on the ground and is not roof-mounted, and has a Rated Nameplate Capacity of 250 kW DC or more.

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

Site Plan Review: Review by the Site Plan Review Authority Planning Board to determine conformance with local zoning bylaws.

Solar Photovoltaic Array: An arrangement of solar photovoltaic panels.

Zoning Enforcement Authority: The Building Inspector.

4. **General Requirements for all Large-Scale Ground-Mounted Solar Power Generation Installations:**

The following requirements are common to all LGSPI to be sited in designated locations in Millis.

Compliance with Laws, By-Laws and Regulations: The construction and operation of all LGSPI 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 LGSPI shall be constructed in accordance with the State Building Code.

Building Permit and Building Inspection: No LGSPI shall be constructed, installed or modified as provided in this section without first obtaining a building permit.

Fees: The applications for a Site Plan Review, a Building Permit, and any other permits related to a LGSPI must be accompanied by the required fees.

5. Site Plan Review:

LGSPI shall undergo site plan review prior to construction, installation or modification as provided in this section.

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

Required Documents:

An application for LSGPI site plan shall include the following documents:

- (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; and
 - 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 proponent, as well as all co-proponents or property owners, if any; and
 - viii.** The name, contact information and signature of any agents representing the project proponent.

- (b) Documentation of actual or prospective access and control of the project site (see also Section entitled “Site Control”);
- (c) An operation and maintenance plan (see also Section entitled “Operation and Maintenance Plan”);
- (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;
- (f) A public outreach plan, including a project development timeline, which indicates how the project proponent will meet the required site plan review notification procedures and otherwise inform abutters and the community; and
- (g) Description of financial surety plan.

The Planning Board may waive documentary requirements for good cause.

Upon receipt of an application for site plan approval of a LGSPI, the Planning Board may engage, at the applicant’s cost, professional and technical consultants, including legal counsel, to assist the Board with its review of the application in accordance with the requirements of Section 53G of Chapter 44 of the Massachusetts General Laws. The Planning Board may direct the applicant to deposit funds with the Planning Board for such review at the time the application is accepted, and add additional funds as needed upon notice. Failure to comply with this section shall be good grounds for denying the application. Upon approval of the application, any excess amount in the account attributable to the project, including any interest accrued, shall be repaid to the applicant.

6. Site Control:

The 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.

7. Operation & Maintenance Plan:

The applicant shall submit a plan for the operation and maintenance of the LGSPI, which shall include measures for maintaining safe access to the installation, stormwater controls, vegetation controls, as well as general procedures for operational maintenance of the installation.

8. Utility Notification:

No LGSPI 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 LGSPI's owner or operator's intent to install an interconnected customer-owned generator; as well as documentation from said utility that they can and will connect the proposed customer-owned (owned by an entity other than the utility company) generator into their power grid.

9. Dimension and Density Requirements:

The following dimensional and density requirements shall apply to all LGSPI.

Setbacks:

For large-scale ground-mounted solar photovoltaic installations, front, side and rear setbacks shall be as follows:

- (a) Front yard: The front yard depth shall be at least 40 feet; provided, however, that where the lot abuts a Conservation-Recreation or Residential district, the front yard shall not be less than 50 feet.
- (b) Side yard: Each side yard shall have a depth at least 20 feet; provided, however, that where the lot abuts a Conservation-Recreation or Residential district, the side yard shall not be less than 50 feet.
- (c) Rear yard: The rear yard depth shall be at least 30 feet; provided, however, that where the lot abuts a Conservation-Recreation or Residential district, the rear yard shall not be less than 50 feet.

Appurtenant Structures: All appurtenant structures to LGSPI shall be subject to reasonable 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, appurtenant structures should be shielded from view and/or joined or clustered to avoid adverse visual impacts.

10. Design Standards:

The following design standards shall apply to all LGSPI.

Lighting: Lighting of LGSPI shall be consistent with local, state and federal law. Lighting of other parts of the installation, such as appurtenant structures, 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.

Signage: A sign consistent with the Town's Zoning By-Law Section VII shall be required to

identify the owner and operator of the LGSPI 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 LGSPI.

Utility Connections: Reasonable efforts, as determined by the Planning Board, shall be made to place all utility connections from the LGSPI 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.

Screening: LGSPI and appurtenant structures shall be adequately screened with vegetation or behind other existing structures from view from public ways and neighboring properties.

Where LGSPI abut residential uses, there must be increased consideration for mitigating visual impact to the residential use. For example, the Planning Board may require items such as increased setbacks, visual screening or sound buffering in the Site Plan Review.

Where installation panels could pose sun glare to abutting properties or roadways, additional screening or other public safety measures may be considered

When vegetation is used, where possible, a diversity of plant species shall be used, with a preference for species native to New England and this region. Use of plants listed in the most recent version of the “Massachusetts Prohibited Plant List” maintained by the Massachusetts Department of Agricultural Resources (or the then equivalent document) is prohibited.

Fencing: Where deemed necessary, fencing may be required as part of the Site Plan Review process.

11. Safety and Environmental Standards:

The following safety and environmental standards shall apply to all LGSPI.

Emergency Services: The LGSPI owner or operator shall provide a copy of the project summary, electrical schematic, and site plan to the Millis Fire Chief. Upon request the owner or operator shall cooperate with Millis 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 provide the Town with the contact information for a responsible person for public inquiries throughout the life of the installation.

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 LGSPI or otherwise prescribed by applicable laws, regulations, and bylaws.

12. Monitoring and Maintenance:

Solar Photovoltaic Installation Conditions: The LGSPI’s owner or operator shall maintain the facility and access road(s) in good condition. Maintenance shall include, but not be limited to,

painting, structural repairs, and integrity of security measures. Site access shall be maintained to a level acceptable to the Millis Fire Chief.

Modifications: All material modifications to an LGSPI made after issuance of the required building permit shall require approval by the Planning Board. In determining whether a modification is material, the Planning Board shall consider the scope of the proposed modification in relation to the approved LGSPI.

13. Abandonment or Decommissioning:

Removal Requirements: Any LGSPI, which has reached the end of its useful life or has been abandoned, shall be removed by the owner or operator 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:

- (a) Physical removal of all LGSPI structures, equipment, security barriers and transmission lines from the site;
- (b) Disposal of all solid and hazardous waste in accordance with local, state, and federal waste disposal regulations.; and
- (c) Stabilization and 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.

Abandonment: Absent notice of a proposed date of decommissioning or written notice of extenuating circumstances, the LGSPI shall be considered abandoned when it fails to operate for more than one year without the written consent of the Planning Board. If the owner or operator of the LGSPI fails to remove the installation in accordance with the requirements of this section within 150 days of abandonment or the proposed date of decommissioning, the Town may, to the extent it is otherwise duly authorized by law, enter the property and physically remove the installation.

Financial Surety: Proponents of LGSPI projects shall provide a form of surety, either through escrow account, bond or otherwise, to cover the cost of removal in the event the Town must remove the installation and remediate the landscape, in an amount and form determined to be reasonable by the Planning Board, but in no event to exceed more than 125 percent of the cost of removal and compliance with the additional requirements set forth herein. Such surety will not be required for municipally- or state-owned facilities. The project proponent shall submit a fully inclusive estimate of the costs associated with removal, in conformance with the removal requirements (a) (b) and (c) of this section, prepared by a qualified engineer. The amount shall include a mechanism for calculating increased removal costs due to inflation.

14. Liability Insurance:

The owner or operator of an LGSPI shall provide the Town Clerk with a certificate of insurance

showing that the property has a minimum of one million dollars in liability coverage, and that the Town of Millis is an additional named insured thereon. Such a certificate shall be supplied on an annual basis upon the renewal of said insurance policy.