

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

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 amending 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 amending 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.	NSPB	NSPB	N	N	N	N	N	P	P

And by amending 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.

Special Permit: [A right or permit granted by the Planning Board pursuant to the authority of MGL c. 40A, § 9 for a purpose specified in this Chapter as one subject to a special permit, following upon review and conditions set by the Board.](#)

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 [or permitted by way of special permit](#) 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. Special Permit:

An LGSPI may be erected in zones R-T and R-S, upon the issuance of a special permit and site plan approval from the Planning Board, on a lot containing a minimum of five (5) acres.

All LGSPI subject to special permit requirements shall conform to the following provisions:

- a) All yard, buffer, and visual screening requirements applicable in the zoning district in which the installation is located shall apply.

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b) All security fences surrounding the installations shall be set back from the property line a distance equal to the setback requirement applicable to buildings within the zoning district in which the installation is located.

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c) All arrays and appurtenant structures necessary for operation of the LGSPI shall be physically located a minimum distance of 150' away from the nearest habitable structure on an adjacent lot.

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d) The visual impact of the commercial solar photovoltaic installation, including all accessory structures and appurtenances, shall be mitigated. All accessory structures and appurtenances shall be architecturally compatible with each other. Whenever reasonable, structures shall be shielded from view by vegetation and/or joined and clustered to avoid adverse visual impacts. Methods such as the use of landscaping, natural features, and fencing may be utilized.

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e) Lighting shall not be permitted unless required by the Planning Board or by the State Building Code. Where used, lighting shall be directed downward and full cut-off fixtures shall be used.

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f) All utility connections from the LGSPI shall be underground unless otherwise specifically permitted otherwise by the Planning Board in the special permit. Electrical transformers and inverters to enable utility connections may be above ground if required by the utility provider.

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g) Clearing of vegetation shall be limited to the minimum necessary for the construction, operation, and maintenance of the LGSPI except as otherwise prescribed by applicable laws, regulations and bylaws or the special permit.

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h) The commercial solar photovoltaic installation owner or operator shall maintain the facility in good condition. Maintenance shall include, but not be limited to, painting, structural repairs, continued compliance with landscaping and screening requirements, and integrity of security measures. The owner or operator shall be responsible for the maintenance of any access roads serving the installation.

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6a. Special Permit Administration

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a) A special permit is required from the Planning Board to erect or install an LGSPI on parcels 5 acres or larger in R-S and R-T zones. A record owner desiring to erect or install a commercial solar photovoltaic installation shall file with the Planning Board an application for a special permit, together with such plans, drawings, specifications, fees, and additional information as required by the Planning Board.

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b) The Planning Board shall have the authority to waive specific provisions of the Use Regulations of this Article upon a determination that a waiver would not be inconsistent with the purpose and intent of this Article.

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c) When acting on a special permit application pursuant to this Article, the Planning Board shall conduct its review, hold a public hearing, and file its decision with the Town Clerk as required by MGL c.40A § 9.

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d) Approval Criteria. In reviewing any application for a special permit pursuant to this Article, the Planning Board shall give due consideration to promoting the public health, safety, convenience and welfare; shall encourage the most appropriate use of land and shall permit no building or use that is injurious, noxious, offensive, or detrimental to its neighborhood. Before the Planning Board may issue such a special permit, it shall determine each of the following:

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1. The LGSPI conforms to the provisions of this Article.

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2. The LGSPI will not be detrimental to the neighborhood or the Town.

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3. Environmental features of the site and surrounding areas are protected, and specifically surrounding areas will be protected from the proposed use by provision of adequate surface water drainage.

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4. The proposed use is in harmony with the general purpose and intent of this Chapter.

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e) Any special permit issued pursuant to this Article shall be subject to such conditions and safeguards as the Planning Board may prescribe. Such conditions may include the requirement of a performance bond, secured by deposit of money or negotiable securities, posted with the Town to guarantee proper maintenance and/or removal of the LGSPI. The amount of the performance bond shall not exceed the estimated cost of the LGSPI's removal. Such conditions may also include additional screening of the facility.

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f) In reviewing any application for a special permit, the Planning Board shall give due consideration to promoting the public health, safety, convenience, and welfare; shall encourage the most appropriate use of land and shall permit no building or use that is injurious, noxious, offensive, or detrimental to its neighborhood.

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6b. Discontinuance

a) An LGSPI shall be deemed to have been discontinued if it has not been in service for a continuous 24-month period. Upon receipt of a Notice of Discontinuance from the Inspector of Buildings, the owner shall have the right to respond to the Notice within 30 days of receipt. The Inspector of Buildings shall withdraw the Notice of Discontinuance and notify the owner that the Notice has been withdrawn if the owner provides information that demonstrates to the satisfaction of the Inspector of Buildings that the LGSPI has not been discontinued. If the LGSPI is determined to be discontinued, the owner shall remove the installation, including all structures equipment, security barriers, and transmission lines, and stabilize or re-vegetate the site as necessary to minimize erosion and sedimentation, at the owner's sole expense within three months of receipt of

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the Notice of Discontinuance. Failure to remove the installation and stabilize the site within said time period may subject the owner to action pursuant to Section XII, Par J. and K., of this Zoning By-Law.

6.7 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.

7.8 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.

8.9 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.

9.10. 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 .

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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.

10.11. 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.

11.12. 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.

12.13. 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.

13.14. 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.

14.15. 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.

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