

ARTICLE __
Zoning Bylaw Amendment

To see if the Town will vote to amend the Town of West Brookfield Zoning Bylaws by:

adding to Section 1.4 new definitions, including but not limited to, “Solar Energy Facility”;

adding to the table of uses in Section 3.26 a new item 9 to require a Special Permit for siting Solar Energy Facilities (Non-Residential) in certain zoning districts within the Town; and

adding as a new Section 3.28 “Ground-Mounted Solar Energy Facilities (Non-Residential)”

Amend the West Brookfield Zoning Bylaw Section 1.4 by adding the following definitions:

“AGRICULTURAL SOLAR PHOTOVOLTAIC FACILITY” means a solar photovoltaic system that is for the exclusive purpose of providing electricity for a property that is primarily in agricultural use as defined under M.G.L. c. 40A, §3. The electricity produced to be used solely for the benefit of the agricultural property.

“LARGE-SCALE GROUND-MOUNTED SOLAR ENERGY FACILITY” means a commercial solar photovoltaic system that is structurally mounted on the ground and has a minimum nameplate output capacity of greater than 250 kw DC.

“SMALL-SCALE GROUND-MOUNTED SOLAR PHOTOVOLTAIC FACILITY” means a commercial solar photovoltaic system that is structurally mounted on the ground and has a nameplate output capacity of less than 250 kw DC.

“COMMERCIAL USE” Where the electricity generated by a solar energy facility is produced, distributed and utilized for use on site or sale or resale off site which allows a monetary gain directly or indirectly to the owner of the property.

“RATED NAMEPLATE CAPACITY” means the maximum rated output of electric power production equipment, such as solar energy facilities or solar photovoltaic facilities. The manufacturer typically specifies this output with a "nameplate" on the equipment.

“RESIDENTIAL GROUND-MOUNTED SOLAR PHOTOVOLTAIC FACILITY” means a residential solar photovoltaic system that is structurally mounted on the ground where the electricity generated by the solar facility is produced and solely utilized, on the residential site, by the owner of the residential property. The output to not exceed 110% of the residential unit's electrical consumption. Requires a special permit in all districts.

“RESIDENTIAL USE” Where the electricity generated by a solar energy facility is produced

solely, on a residential site, for the use and benefit of the owner of the residential property.

“SOLAR ENERGY FACILITY” A means a ground-mounted solar photovoltaic installation that is designed, constructed and intended to convert solar energy to electricity generated for residential or commercial use. In this bylaw "Solar Energy Facility" shall include and the bylaw shall apply and not be limited to: solar energy facilities, whether referred to as "Solar Energy Facility," "Photovoltaic Facility," "Solar Photovoltaic System," or otherwise.

Amend the West Brookfield Zoning Bylaw adding to Section 3.26, GROUND-MOUNTED SOLAR ENERGY FACILITIES (NON-RESIDENTIAL) as follows:

“9. Solar Energy Facilities (Non-residential)	RR	RN	G
	SP	SP	SP

Amend the West Brookfield Zoning Bylaw adding a new Section 3.28 GROUND-MOUNTED SOLAR ENERGY FACILITIES (NON-RESIDENTIAL) as follows:

3.28.1. Purpose

The purpose of this bylaw is to regulate the development of ground-mounted Solar Energy Facilities by providing standards for their placement, design, construction, operation, monitoring, modifications, and removal; to protect public health, safety or welfare in accordance with M.G.L. c. 40A, § 3; to protect and preserve farmland and open space as promoted by the Commonwealth of Massachusetts; to minimize impacts on the scenic, natural and historic resources of West Brookfield; and in the case of Large-Scale Commercial Solar Energy Facility, to provide adequate financial assurance for the eventual decommissioning of such installations.

3.28.2. Permit Granting Authority

Subject to the requirements of this bylaw, Solar Energy Facilities shall be permitted by Special Permit only in the RR, RN and G zoning districts.

The Zoning Board of Appeals shall be the Special Permit Granting Authority for a ground-mounted Solar Energy Facility.

3.28.3. Applicability

This bylaw Section 3.28 applies to all proposed Solar Energy Facilities in the Town of West Brookfield. This bylaw also pertains to physical modifications that materially alter the type, configuration, or size of these installations or related equipment. Specifically, Solar Energy Facilities are permitted as follows:

- A. One (1) Solar Energy Facility with nameplate capacity of 250kw or greater for municipal government purposes, sited "As of Right" on one selected parcel of Town-

owned land, described in Section 3.28.10(C)(1).

- B. Solar Energy Facilities with nameplate capacity of 250kw or greater shall be sited by Special Permit.
- C. Solar Energy Facilities with name plate capacity of less than 250kw shall be sited by Special Permit.

This bylaw does not pertain to solar photovoltaic panels installed on residential, industrial or commercial structures, i.e., those that are not ground-mounted. Those installations are subject to the State Building Code.

This bylaw does not pertain to an Agricultural Solar Photovoltaic Facility for the exclusive purpose of agriculture, with electrical power generated therefrom to be used on the property where such Solar Energy Facility is located as these are exempt from regulation under zoning bylaw except where necessary to protect public health, safety or welfare in accordance with M.G.L. c. 40A, § 3.

3.28.4. General Requirements for all Ground-Mounted Solar Photovoltaic Installations

The following requirements shall apply to all ground-mounted solar photovoltaic installations:

- A. All Solar Energy Facilities except for those explicitly exempted pursuant to this bylaw shall undergo site plan review, including a public hearing, as part of the special permit process conducted by the Zoning Board of Appeals prior to construction, installation, or modification as provided in Section 3.28.8.
- B. Upon receipt of an application for a Special Permit, the Zoning Board of Appeals may engage, at the applicant's expense, professional and technical consultants, including legal counsel, to assist the Board with its review of the application in accordance with the requirements of M.G.L. c. 44, § 53G. The Zoning Board of Appeals may direct the applicant to deposit funds with the Zoning Board of Appeals for such review at the time the application is accepted and may require the applicant to add additional funds as needed upon notice. Upon approval of the application, any excess amount in the account attributable to the application, including any interest accrued, shall be returned to the applicant.

3.28.5. Compliance with Laws, Bylaws and Regulations

The construction and operation of all ground-mounted Solar Energy Facilities 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 ground-mounted Solar Energy Facility shall be constructed in accordance with the State Building Code.

3.28.6 Building Permit and Building Inspection

No ground-mounted Solar Energy Facility shall be constructed, installed or modified as provided in this section without first obtaining a building permit.

3.28.7 Fees

The application for a building permit for a ground-mounted Solar Energy Facility must be accompanied by the fee required for a building permit.

3.28.8 Site Plan Review

All ground-mounted Solar Energy Facilities shall undergo site plan review by the Permit Granting Authority prior to construction, installation or modification as provided in this section.

A. Required Documents

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

1. A site plan showing property lines and physical features, including roads, for the project site;
2. A plan showing proposed changes to the landscape of the site, grading, vegetation clearing and planting, exterior lighting, screening vegetation or structures;
3. 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 showing the proposed layout of the facility, views of the site from residences and public ways from which the facility would be visible, and the proposed installation with the planned screening for the facility in place;
4. One-line or three-line electrical diagram detailing the solar photovoltaic installation, associated components, and electrical interconnection methods, with all Massachusetts Electrical Code, 527 CMR § 12.00-compliant disconnects and overcurrent devices;
5. Technical specifications of the major system components, including the solar arrays, mounting system, and inverter;
6. Documentation of the major system components to be used, including the PV panels, mounting system, and inverter;
7. The names, addresses, telephone numbers, and email addresses of: the owner and applicant, as well as all co-proponents or property owners, if any; and of the proposed system installer and operator and agents authorized to act on their behalf, which information shall be updated within 30 days whenever the land changes ownership, a new installer is retained by the owner or applicant, or a new operator takes over operation of the facility;
8. Documentation of actual or prospective access and control of the project site (see also Section 3.28.8 (B));
9. An operation and maintenance plan (see also Section 3.28.8 (C));

10. 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);
11. Proof of liability insurance at an amount approved by the Special Permit Granting Authority; and
12. Description of financial surety that satisfies Section 3.28.18;
13. Architectural concepts of sight lines from abutting residential, commercial and industrial structures;
14. A glare analysis and proposed mitigation, if any, to minimize the impact of glare on affected properties; and
15. A decommissioning plan.

All plans and maps shall be prepared, stamped and signed by a Professional Engineer licensed to practice in the Commonwealth of Massachusetts. The Permit Granting Authority may waive documentary requirements, as it deems appropriate.

B. Site Control

The applicant, if not the record owner of the property where the Solar Energy Facility is proposed, shall submit documentation evidencing actual or prospective access to and control of the project site sufficient to allow for construction and operation of the proposed Solar Energy Facility, e.g., an easement, lease or license agreement, or an option to enter into the same, fully executed by the record owner of the property and the applicant.

C. Operation and Maintenance Plan

1. The applicant shall submit an operation and maintenance plan for the Solar Energy Facility that includes: measures for maintaining safe access to the facility in all weather conditions; storm water controls; vegetation controls; and general procedures for operating and maintaining the facility and surrounding areas of the sites well as general procedures for operational maintenance of the installation.
2. Adherence to the operation and maintenance plan shall be included as a condition of the Special Permit.

D. Insurance

1. At the time of application for a building permit, the applicant shall provide to the Building Inspector evidence of insurance coverage sufficient to build and operate the Solar Energy Facility. Minimum required coverages include: one million dollars (\$1,000,000) in general liability coverage by occurrence and five million dollars (\$5,000,000) in the aggregate; or an excess liability policy in the amount of five million dollars (\$5,000,000).

3.28.9 Utility Notification

1. No ground-mounted solar photovoltaic installation shall be constructed until evidence has been given to the Permit Granting Authority that the utility company that operates the electrical grid where the installation is to be located has been informed of the solar photovoltaic installation applicant's intent to install an interconnected customer-owned generator.
2. Off-grid systems shall be exempt from this requirement.

3.28.10 Dimensional and Density Requirements

A. Setbacks

1. All facilities shall have front, side and rear yard setbacks of at least 50 feet for any fencing that is required by the Zoning Board of Appeals. Fencing shall be required to fully enclose the facility. The height of such fencing shall be eight feet.
2. Solar arrays and related equipment shall have front, side and rear yard setbacks of a minimum of 100 feet.
3. If a front, side or rear lot line abuts one or more residences, the setback for that lot line shall be a minimum of 200 feet.
4. Setback from a public way shall be at least 200 feet.
5. A 50-foot minimum setback shall apply when the abutting parcel has the same owner and the same proposed use as that for the proposed facility.
6. The Zoning Board of Appeals may allow a lesser setback along a property line, where, in its judgment, the proposed facility is not likely to negatively affect an existing or permitted land use on the abutting property.
7. The Zoning Board of Appeals may require a greater setback along a property line, where in its judgment the proposed facility is likely to negatively affect an existing or permitted land use on the abutting property.

B. Appurtenant Structures

1. All appurtenant structures to ground-mounted solar photovoltaic installations shall be subject to reasonable regulations concerning the bulk and height of structures, lot area, setbacks, open space, parking and building coverage requirements.
2. All structures appurtenant to a Solar Energy Facility, including, but not limited to, equipment shelters, storage facilities, transformers, and substations, shall be subject to the set-back and vegetative screening requirements, shall be architecturally compatible with each other.

3. Whenever reasonable, structures shall be screened from view by vegetation approved by the Permit Granting Authority and/or joined or clustered to avoid adverse visual impacts on the neighborhood, abutting properties, and public ways.

C. Design Standards

1. Town and Private Land

- a. At the time of application for a building permit, the applicant shall provide to the Building Inspector evidence of insurance coverage sufficient to build and operate the Solar Energy Facility. Minimum required coverages include: one million dollars (\$1,000,000) in general liability coverage by occurrence and five million dollars (\$5,000,000) in the aggregate; or an excess liability policy in the amount of five million dollars (\$5,000,000). The Town of West Brookfield shall be named as an additional insured for such policies of insurance, and the applicant shall furnish a certificate of insurance to the Town annually.

2. Large-Scale Solar Energy Facilities:

- a. A large-scale solar Energy facility with nameplate capacity of 250kw or greater may have a solar array footprint that is greater than five acres, but no more than ten acres.
- b. The total number of large facilities in operation concurrently within the Town shall be limited to ten. Included within this number are large facilities that have received a permit to operate from the Zoning Board of Appeals as of the effective date of this Solar Energy Facilities by-law. All large facilities must meet the requirements of Section 4 of the West Brookfield Zoning Bylaw (Dimensional Requirement).

D. Siting Requirements

1. One of the following conditions must be met:

- a. The location of the facility, due to topography, tree lines and/or vegetation, cannot reasonably be seen from a residence or public way during all seasons of the year; or
- b. The location of the facility is so distant from a residence or public way, and/or so obscured by topography, tree lines, and/or vegetation, that the visual impact of the facility is rendered negligible, as determined by the Zoning Board of Appeals, during all seasons of the year.

E. Screening:

1. Where the front, side or rear yard faces and/or abuts one or more residences or a public way, a landscape architectural plan will be required. The plan's object shall be to minimize to the greatest extent reasonable the visual impact of the Solar Energy

Facility.

2. The plan shall show how the facility will be screened from view from facing residences and public ways during all seasons of the year, using mature plantings, vegetation, berms, fencing, land contouring, and strategic placement of the solar panels and appurtenant structures.
3. It shall be a condition of the Special Permit that Town boards shall have the authority view and inspect plantings at the site at selected intervals, i.e., at 2, 5, 7, 10, 13, 15 and 18 years from the date of the Special Permit approval to ensure that such plantings continue to be sufficient and in good health, and that damaged, diseased or dead plantings shall be replaced at the sole cost of the property owner and/or the Special Permit holder.

F. Lighting

1. Lighting of solar photovoltaic installations limited to that required for safety and operational purposes and 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.
2. Lighting shall not be intrusive in any way on abutting properties.
3. Where feasible, lighting of the solar photovoltaic installation shall be directed downward and shall incorporate full cut-off fixtures to reduce light pollution.

G. Signage

1. Signs shall comply with Section 5.3 of the West Brookfield Zoning Bylaws (Signs).
2. The following signs shall be required:
 - a. Those necessary to identify the owner, provide a 24-hour emergency contact phone number, and warnings of any danger, and;
 - b. Educational signs providing information about solar photovoltaic panels and the benefits of renewable energy.
3. Signs for solar photovoltaic installations shall not exceed sixteen (16) square feet in area and shall not be used for displaying any advertising except for reasonable identification of the manufacturer or operator of the solar photovoltaic installation.

H. Land Clearing, Soil Erosion and Habitat Impacts

1. Clearing of natural vegetation shall be limited to what is necessary for the construction, operation and maintenance of the ground-mounted solar photovoltaic installation or otherwise prescribed by applicable laws, regulations, and bylaws.

2. The installation design shall minimize fragmentation of open space areas and shall avoid permanently protected open space when feasible.
3. The installation shall be located in such a manner that it does not have significant negative impacts on rare species in the vicinity.

I. Environmental Impacts

1. Proposed structures (including panels) shall be integrated into the existing terrain and surrounding landscape by minimizing use of and impact to wetlands, steep slopes, and hilltops; protecting visual amenities and scenic views; minimizing tree, vegetation, and soil removal; and minimizing grade changes.
2. Limitations as to cutting trees, removing vegetation, land clearing and prevention of soil erosion shall be included as conditions in the Special Permit.
3. Subject to M.G.L. c. 132B, the Massachusetts Pesticide Control Act, and the regulations promulgated thereunder, the use of pesticides and herbicides within 200 feet of areas defined in 333 CMR 11.00 and 14.00, e.g. roadways, agricultural areas, sensitive areas, wetlands and vernal pools is prohibited.

3.28.11. Utility Connections

Reasonable efforts, as determined by the Permit Granting Authority, 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.

3.28.12. Safety and Environmental Standards

A. Emergency Services

1. The applicant shall provide a copy of the project summary, operation and maintenance plan approved by the Zoning Board of Appeals, electrical schematic, and site plan to the West Brookfield Fire Chief and Police Chief. The applicant and operator shall cooperate with local emergency services in developing an emergency response plan which will ensure that emergency personnel have immediate, 24-hour access to the facility.
2. All means of shutting down the solar photovoltaic installation shall be clearly marked in the plan. The applicant shall identify an official representative for public inquiries throughout the life of the installation.
3. The operation and maintenance plan shall be reviewed annually with local emergency officials and revised as necessary. Safety personnel may request at any time that the

operator provide onsite training in accessing and shutting down the solar installation. All means of shutting down the solar energy facility shall be clearly marked. The operator shall identify a qualified contact person who can provide assistance to local officials during an emergency. The operator shall update the contact information immediately, and so notify the West Brookfield Fire Chief and Police Chief, whenever there is a change in the contact person.

B. Noise and Glare

1. There shall be no increase in background noise measured "A weighted" at the property line or a noise-sensitive receptor (for example, a higher terrain location that may be impacted or a location with sensitive persons such as a school). A noise analysis must be provided by the applicant and approved by the Zoning Board of Appeals.
2. The solar panels shall be positioned in such a way that there is no possibility of glare on a residence or public way at any time during the day.

3.28.13. Monitoring and Maintenance

- A. The applicant shall maintain its solar photovoltaic installation facilities in good condition. Maintenance shall include, but not be limited to, painting, structural repairs, and integrity of security measures and visual screening components. The operator shall be responsible for maintaining adequate access for emergency vehicles and maintenance equipment throughout the year with an annual inspection by the Fire Chief and the Police Chief. The applicant shall be responsible for the cost of maintaining the solar photovoltaic installation and any access road(s), unless accepted as a public way.
- B. The applicant shall annually file an operation and maintenance report with the Zoning Board of Appeals no later than 45 days after the end of the calendar year, confirming that the operation is ongoing and has not been abandoned, and that the operation and maintenance plan is being followed. Failure to file the report within the required time may be considered evidence that the facility has been abandoned and the Zoning Board of Appeals may take action as described in Section 3.28.16.
- C. The applicant shall comply with any and all federal, Massachusetts and local installation and operation requirements, whether adopted before or after approval of a Special Permit.
- D. The Town, through its boards and agents, shall be permitted to enter the premises in the event of emergency, or otherwise upon 48 hours' written notice to the applicant for the purpose of monitoring compliance with the terms of the Special Permit.

3.28.14. Modifications

- A. All material modifications to a solar photovoltaic installation made after issuance of the required building permit shall require approval by the Permit Granting Authority and building inspector.
- B. A change to the specifications of any of the equipment installed at the site or a change that alters the type, configuration or size of the facility shall be considered a material modification.
- C. A change of the supplier for any of the equipment installed at the site shall not be considered a material modification. The Zoning Board of Appeals may specify in the special permit, the specific kinds of, or standards for, modifications which shall be subject to further approval.

3.28.15. Discontinuance and Decommissioning.

- A. Any solar energy facility that has reached the end of its useful life or has been discontinued, decommissioned, or abandoned, as defined in Section 3.28.16 shall be removed no more than 150 days after the date of discontinued operations.
- B. The applicant and/or the land owner shall notify the Zoning Board of Appeals and building inspector by certified mail of the date of discontinued operations or decommissioning of the Solar Energy Facility together with plans for removal of the same. Removal of the Solar Energy Facility upon discontinuance, decommissioning, or abandonment of a Solar Energy Facility shall include:
 - 1. Physical removal of all ground-mounted solar photovoltaic installations, structures, equipment, and transmission lines from the site, including, but not limited to, the solar arrays, structures, appurtenant equipment, security barriers, and electrical transmission line above and below grade; and
 - 2. Stabilization or re-vegetation of the site as necessary to return the site to its original state, and minimize erosion; and
 - 3. Disposal of all solid and hazardous waste in accordance with local, state and federal waste disposal laws and regulations.

The Permit Granting Authority may allow the applicant to leave landscaping or designated below-grade foundations to minimize erosion and disruption to vegetation.

3.28.16. Abandonment

- A. It shall be a condition of the Special Permit that the applicant shall provide to the Permit Granting Authority no less than 90 days' notice of dissolution of the applicant's entity or change of entity form, transfer of interest in the Solar Energy Facility or assignment of any interest in the land where the Solar Energy Facility is located, or proposed decommissioning of the Solar Energy Facility. Failure to provide

such notice within the required time may be considered evidence that the facility has been abandoned and the Zoning Board of Appeals may take action as described in Section 3.28.16.B-E and 3.28.17.E.

- B. A solar photovoltaic installation shall be considered abandoned:
 - 1. six months after the occurrence of any of the events set forth in Paragraph A, unless written notice of extenuating circumstances regarding the same is delivered within such time; or
 - 2. if solar photovoltaic installation fails to operate for more than six months without the written consent of the building inspector.
- C. If the applicant 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, or its agents, may enter the property and physically remove all equipment and structures that comprise the ground-mounted solar photovoltaic installation and restore the site to its original state.
- D. It shall be a condition of the Special Permit that the applicant and landowner shall agree to allow entry to remove an abandoned installation.
- E. The Town's cost for the removal will be charged to the property owner in accordance with the provisions of M.G.L.c 40, § 58.
- F. If the owner or his authorized agent fails to comply with an order issued pursuant to M.G.L. c. 139, § 3 and the town demolishes or removes any burnt, dangerous or dilapidated building or structure or secures any vacant parcel of land from a trespass, a claim for the expense of such demolition or removal, including the cost of leveling the lot to uniform grade by a proper sanitary fill, or securing such vacant parcel shall constitute a debt due the city or town upon the completion of demolition, removal, or securing and the rendering of an account therefor to the owner or his authorized agent, and shall be recoverable from such owner in an action of contract pursuant to M.G.L. c. 139, § 3A as a tax lien on the property.

3.28.17. Financial Surety

- A. At the time of application, the applicant shall submit a decommissioning plan which shall include a fully inclusive estimate of the costs associated with decommissioning and removal of the proposed solar energy facility prepared by a professional engineer licensed in the Commonwealth of Massachusetts with solar development experience, which estimate shall be subject to review and approval by a similarly qualified professional engineer retained by the Zoning Board of Appeals at the applicant's expense.

- B. It shall be condition of the Special Permit that upon approval of the Special Permit the applicant shall furnish security in the form of a cash deposit in the minimum amount of \$100,000.00 / MW (DC)" of installed system capacity which sum shall be held by the by the Town Treasurer pursuant to M.G.L. c. 44, § 53 ½ to cover the cost of removal in the event the town must remove the installation and remediate the landscape.
- C. It shall be condition of the Special Permit that the applicant shall furnish estimated costs of decommissioning annually no later than 45 days after the end of the calendar year and that an amount equal to the balance of such updated estimated cost of decommissioning less the amounts reserved, if any, will be reserved for decommissioning and site restoration. The amount required to be deposited in said account shall be determined from calculations based upon the all-inclusive costs of removal of the solar panels, removal of all electrical connections and equipment, and the legal proper disposal of all equipment and waste. The calculation shall also include all costs for returning the landfill cap and property to pre-project conditions. The calculations shall include all professional costs, labor costs, trucking, hauling, and disposal costs, landscaping costs, and any other cost not mentioned but which is expected to be incurred.
- D. The surety shall be kept in place until such time as the decommissioning work has been completed, provided, however, that funds on deposit with the Town may be used to offset the costs of the decommissioning. Such surety shall not be required for municipally owned or state-owned facilities.
- E. The Zoning Board of Appeals shall be authorized to expend from such fund for removal of an abandoned Solar Energy Facility and shall comply with reporting requirements imposed by the Town Treasurer.
- F. Upon approval of the removal of a Solar Energy Facility by the applicant any excess amount in the account attributable to the application, including interest accrued, if any, shall be returned to the applicant.

3.28.18. Severability

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