

## ATM ARTICLE 27:

ATM ARTICLE 27: To see if the Town will vote to amend the Zoning Bylaw, as on file with the Town Clerk, by adding a new section entitled, "Ground-Mounted Solar Energy Facilities", that identifies solar energy facility site locations, selection criteria and evaluation criteria as well as amending associated definitions, procedures, and schedules, or take any other action relative thereto.

ENERGY COMMITTEE

**RECOMMENDATION: Not Approve (Unanimous, 0-10-0).**

The Advisory & Finance Committee recommends Town Meeting NOT approve Article 27. Town Meeting approval of this article would establish a new bylaw establishing standards for the installation of commercial-grade ground-mounted solar facilities. While the Committee agrees that a bylaw addressing such facilities is needed, it was concerned about some gaps in the bylaw proposed. Specifically, the Committee is concerned about the inadequacy of language relating to financial surety to protect the Town financially for the cost of decommissioning and site restoration at the completion of its useful life or in the event of abandonment. The Committee also raised concern about the absence of language relating to limitations on the clear-cutting of trees and other natural vegetation in the course of site development for the project.

<b>ROLL CALL VOTING CHART</b>																	
ARTICLES		Kevin Canty	Betty Cavacco	Harry Helm	Shelagh Joyce	Ethan Kusmin	Mike Lincoln	Marcus McGraw	Patricia McPherson	Christopher Merrill	John Moody	Patrick O'Brien	Harry Salerno	Marc Sirrico	Scott Stephenson	Robert Cote	<b>VOTE TOTAL</b> FOR-AGAINST-ABSTAIN
<b>Y - For</b>																	
<b>N - Against</b>																	
<b>A - Abstain</b>																	
<b>X - Absent</b>																	
<b>Ch - Chair did not vote</b>																	
<b>27</b>	Ground Mounted Solar - Amend Zoning Bylaw	N	N	N	N	N	X	N	X	Ch	N	X	N	X	N		<b>0 - 10 - 0</b>

FINAL REPORT AND RECOMMENDATION OF THE PLANNING BOARD TO AMEND THE ZONING BYLAW TO CREATE GROUND-MOUNTED SOLAR PHOTOVOLTAIC SYSTEM REQUIREMENTS

DATE OF PUBLICATION OF PUBLIC HEARING: February 17, 2016  
February 24, 2016

DATE OF PUBLIC HEARINGS: March 7, 2016

VOTE: On March 7, 2016, the Planning Board voted (4-0) to support the following amendment to Town Meeting:

NEED AND JUSTIFICATION:

Massachusetts General Laws (Chapter 40A §3) states that “No zoning by-law shall prohibit or unreasonably regulate the installation of solar energy systems or the building of structures that facilitate the collection of solar energy, except where necessary to protect the public health, safety or welfare.” Therefore, the Town cannot prohibit the construction of solar energy systems but can establish **reasonable** regulations.

Recently, the Town has permitted a growing number of commercial-scale, ground-mounted solar facilities but currently we have no standards covering the proper installations of such facilities.

This amendment establishes reasonable standards and protections for neighboring residential areas and the Town as a whole.

The amendment includes provisions that

- Only apply to ground mounted facilities;
- Require site plan review by the Planning Board.
- Prohibit large scale commercial solar facilities (over forty acres);
- Establishes natural vegetated buffers and screening measures;
- Requires security controls to limit unauthorized access;
- Establishes removal and decommissioning provisions; and
- Includes stormwater standards.

The following solar facilities are exempt from this amendment:

- Rooftop systems;
- Ground mounted system under 1,500 square feet in size
- Systems located on agricultural land and used for energy generation for the agricultural use; and
- Systems located on already disturbed area in commercial and industrial districts.

INTENT:

The intent of this bylaw is to promote, by-right, subject to Site Plan Review, in all Districts, the generation of solar energy while preserving the natural environment and supporting reduction of Plymouth’s carbon footprint.

PROPOSED AMENDMENT:

To be inserted:

**205-3 Definitions**

**ACTIVELY OCCUPIED** – As applied to the site of a GMSPS, that portion of a Development Site that contains the solar array, accessory structures, interconnection infrastructure and internal vehicle access roads.

**DISTURBED AREA** – Land which, due to human activity or as a result of natural forces, including but not limited to fire or flooding, is devoid of significant naturally occurring vegetation, the topography of which has been significantly altered or destabilized by any means.

**GRID** – Power transmission system used to transfer electricity from generation facilities to commercial and residential electric loads.

**GROUND-MOUNTED** – A solar energy system installed directly on the ground through various ground-mounting technologies which may include fixed, passive tracking or active tracking metal racking.

**GROUND-MOUNTED SOLAR PHOTOVOLTAIC SYSTEM (GMSPS)** – A ground-mounted, solar energy system that is either:

1. Located on land in agricultural use as defined in G. L. c.128, § 1A and used primarily for the accessory generation of energy for the operation of the agricultural use, or;
2. Installed for the principal purpose of selling generated electricity to the grid.

**205-77. Ground-Mounted Solar Photovoltaic Systems**

A. **Intent.** The intent of this bylaw is to promote, by-right, subject to Site Plan Review, in all Districts, the generation of solar energy while preserving the natural environment and supporting reduction of Plymouth’s carbon footprint.

**B. Location and Area Requirements.**

1. Site Plan Review is not required for a GMSPS that:
  - a. Actively occupies 1,500 square feet or less of land and has a total GMSPS height of less than 8 feet from final grade;
  - b. is located on agricultural land, and used primarily for the accessory generation of energy for the operation of the agricultural use; or

c. is located on a Development Site consisting primarily of Disturbed Area, and, if located within any of the following Districts, provided a minimum 200-foot Buffer is in place along each Lot line that abuts a Residential District:

- I. Airport (AP)
- II. Arterial Commercial (AC)
- III. General Commercial (GC)
- IV. Highway Commercial (HC)
- V. Light Industrial (LI)
- VI. Light Industrial/Waterfront (LI/WF)
- VII. Mixed Commerce (MC)

2. Prohibited. A GMSPS that actively occupies more than forty (40) acres in area.

C. **Standards.** The following standards apply to all GMSPS:

1. **Setback** – A GMSPS site and construction thereon shall conform to the dimensional and intensity requirements set forth in Table 5 of the Zoning Bylaw.

2. **Design** –

a. **Lighting** – High efficiency lighting, such as LED, or equivalent, shall be limited to that required for safety and operational purposes, and shall comply with the requirements of §205-65 Prevention of Light Pollution.

b. **Utility Connections** – Cabling and utility connections within the GMSPS shall be placed underground.

c. **Security** – The GMSPS must be physically secured by measures including, but not limited to, appropriate fence material, construction, locking devices and surveillance equipment.

d. **Signage** –

i. Required: A sign complying with Sign bylaw §205-19 shall identify the owner and operator, if not the same, and provide the following information: business name for any company or other entity owning and/or operating the installation, with the business address and name of a contact person for each; electric utility or other safety warnings and a 24-hour emergency contact phone number.

ii. Prohibited: Any advertising display.

d. All emergency vehicle access ways shall conform to dimensional requirements of the Plymouth Fire Department.

e. Screening, as defined in §205-3, shall be installed to shield residences from a GMSPS.

f. Buffers as defined in §205-3 are required as follows:

i. A minimum of 50 feet for 1 to 2 Megawatt (MW) systems;

ii. A minimum of 100 feet for systems greater than 2 MW.

3. **Land Clearing, Soil Erosion and Habitat Impacts.**

- a. Clearing of native vegetation on any undeveloped or land in its natural state shall be limited to that necessary for the construction, operation and maintenance of the GMSPS. Effective internal storm water management and erosion control features shall be maintained at all times during and post-construction. Installed fencing shall maintain a minimum distance of 8 inches from final grade for small wildlife passage.
- b. Stormwater management controls shall comply with Plymouth's Stormwater Design Guidelines. Percolation tests will be required if no stormwater system controls are provided.
- c. Management of all vegetated areas within the GMSPS shall be maintained throughout the life of the project through mechanical means and without the use of chemical herbicides.

4. **Information Required with Zoning Permit for all GMSPS.**

- a. **Landscape Plan** – A landscape plan prepared by a Registered Landscape Architect is required and shall include location of existing significant trees, shrubs and grasses to remain and all proposed additions, identified by specimen size and species at installation. Low growth vegetation shall be planted and maintained in areas under GMSPS rack equipment.
- b. **Materials** – Manufacturer's specifications for a proposed GMSPS shall be provided for all equipment and attendant facilities and include documentation of the major system components to be used, including panels, mounting system, rated name plate capacity, colors, inverter and interconnection details.
- c. **Safety** – The GMSPS Owner or Operator shall submit a copy of the project summary, electrical schematic, and Development Site plan to the Building Commissioner, with a copy for review by the Fire Chief. Instructions to de-energize the system shall be made available to public safety personnel. The owner or operator shall identify a responsible person for public inquiries throughout the life of the GMSPS.
- e. **Financial Surety** – Except for a municipally owned GMSPS, a project designed to generate in excess of 2MW shall require a performance guarantee in the form of a cash bond to cover the cost of GMSPS removal in the event the town must remove the installation and stabilize the Development Site with loam and seed in an amount approved by the Building Commissioner.

5. **Other Requirements.**

- a. **Modification** – A substantial modification to a GMSPS shown on an approved Site Plan shall require Site Plan modification in compliance with the standards and procedures applicable to the original application.

- b. **Segmentation** – Adjacent parcels in the same ownership or control shall be deemed to be one parcel for purpose of calculating the area limitation of §B.2 above.
- c. **Abandonment** – A GMSPS shall be deemed abandoned when it fails to operate or its operations are discontinued for more than one year without the written consent of the Building Commissioner; or if the Building Commissioner has determined that the installation is a hazard to public safety and the conditions have not been corrected within three (3) months.
- d. **Site Restoration** – A GMSPS must be removed by its owner at the end of its useful life or when its use has been discontinued or abandoned as provided herein, and shall be removed by the owner or operator within 150 days from the date of discontinuation of operations. The owner or operator shall notify the Building Commissioner by certified mail of the proposed date of discontinuation and provide detailed plans and schedule for GMSPS removal.

TOWN OF PLYMOUTH

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Timothy Grandy, Chairman

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Kenneth Buechs

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Marc Garrett

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Malcolm MacGregor

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Paul McAlduff

BEING A MAJORITY OF THE PLANNING BOARD

DATE SIGNED BY THE PLANNING BOARD: \_\_\_\_\_

DATE FILED WITH TOWN CLERK: \_\_\_\_\_

cc: Town Clerk  
 Board of Selectmen  
 Advisory and Finance Committee