

Richmond Planning Board Meeting  
Town Hall  
Minutes  
February 11 2019

Members present: Rick Bell, Doug Bruce, John Hanson (Chairman), Katherine Keenum, Pete Lopez

Mr. Hanson opened the meeting at 6:29 P.M. He suggested that the first item on the agenda, the approval of the minutes, be deferred until the next meeting because a proposal for a zoning bylaw change to regulate solar energy systems (hereafter, "solar bylaw") should be the Board's first priority and might require long discussion. Mr. Bell, however, said that the minutes looked fine to him as is. Therefore:

1. Mr. Bell moved that the minutes for January 11, 2019, be approved. Mr. Hanson seconded the motion. The motion was approved unanimously by a vote of 5-0.
2. To begin discussion of the proposed solar bylaw (see Exhibit 1), Mr. Hanson reviewed the process by which a change to Richmond's *Zoning By-Law* was made. The Planning Board drafted and recommended changes; but it was then up to the voters to accept or reject a recommendation, either at the Town's Annual Meeting or a Special Town Meeting. In general, it was preferable to present a proposed change at the annual May meeting, because turn-out would be higher than at a special meeting and a vote would therefore be more broadly representative of town sentiment.

He said that uncertainty was the enemy of good planning, and complaints arose when regulations were unclear. Richmond's *Zoning By-Law* made provision for ground-mounted large-scale photovoltaic installations on town land north of the school and at the dump on Cone Hill Road but did not cover ground-mounted systems on private property. It was desirable to get out ahead of complaints by recommending regulations that everyone could understand and follow.

For the proposed solar bylaw to be placed as an article on the 2019 Annual Town Warrant, several things had to happen on a relatively tight schedule. Mr. Hanson said he would confirm the specific deadlines with the Town Clerk. The basic steps were to:

- Schedule a public hearing on the proposed bylaw change; he suggested running it concurrently with the next Planning Board meeting on March 11, 2019;
- Post notice of the hearing at Town Hall two weeks in advance;
- Advertise the hearing in the Berkshire *Eagle* in two successive weeks;
- Hold the hearing;
- Revise the proposed bylaw change in light of public comment if necessary.

If after this night's discussion, the Board found it was not ready to go forward to meet the above schedule, it could recommend a solar bylaw later in the year at a special town meeting, wait until the annual meeting in May 2020, or do nothing at all. Since Ms. Keenum had put her concerns in writing (see Exhibit 2), following the structure of the draft bylaw, Mr. Hanson proposed using her memorandum as the basis for working through the proposal.

Mr. Lopez said he understood the need to get ahead of complaints but asked how topics were selected for attention. Besides solar energy and the change from the Board of Selectmen to the Planning Board as the Special Permit Granting Authority (SPGA) for accessory buildings on the night's agenda, were there other issues that needed to be addressed?

Mr. Hanson replied that solar energy had been on the back burner for years partly because when the Department of Energy Resources (DOER) guidelines for local bylaws came out, he had read them and thought there was nothing Richmond could do. This year, the Board's focus had been turned to matters made more urgent by events. The need for clear regulation of short-term rentals and for special functions held at farms had become apparent after unexpected complaints by residents in affected neighborhoods. The bylaw to regulate marijuana activity in town was prompted by the legalization of cannabis at the state level. Mr. Bell explained that a temporary moratorium on marijuana activity in Richmond expired at the end of December 2018 and had to be replaced with a permanent bylaw. Otherwise, added Mr. Hanson, marijuana businesses could have gone anywhere in town.

Mr. Hanson said that from what the Board had heard from residents about the impact of short-term rentals and farm functions on neighborhoods, it became clear that we did not want to wait until neighbors were feuding before drafting a solar bylaw. Reasonable regulation was desirable as long as it did not go too far, but it was hard to pin down what is "reasonable" in the absence of feedback. In drafting the proposed solar bylaw, he had thought the best way to go was to look at what other communities in the area had done.

Mr. Lopez asked when the Board made recommendations, were they based on avoiding conflict, the environment, safety?

Mr. Bell replied on public health, safety, and welfare.

Mr. Hanson said that it went much further and included maintaining scenic beauty and the rural nature of the town, protecting agriculture, and so forth. What people wanted to know when they undertook a project was what they needed to do to go forward. What neighbors wanted to know was that they could make their opinions heard if something was potentially objectionable.

Everyone always had to deal with a building permit, but in addition zoning could regulate certain activities with a limited set of tools. Activities could be banned outright, allowed but only in certain districts or with limitations, or allowed with a special permit. Special permits were a standard tool of zoning because they gave abutters a chance to speak at a public hearing and allowed the SPGA to set conditions. When an activity was allowed by right, no notice was given to neighbors.

Mr. Bruce asked whether neighbors were notified when someone got a building permit for, say, a child's playhouse. Mr. Hanson replied that they were not as long as the project met the criteria for a by-right accessory building.

Mr. Hanson said the Richmond's *Zoning Bylaw* was silent on ground-mounted solar energy systems as accessories to dwellings. Larger towns with more categories of zoning districts (e.g., light industrial) had more options, but Richmond was almost entirely residential/agricultural. The town did not have the tool of restricting ground-mounted systems to particular districts, and yet people did not want their neighborhoods to become light

industrial. A variance as a zoning tool was not really a broad solution for the solar issue because variances were intended to be used only for unique cases—for a house down in a hollow, for example, that might have to exceed a height limit put on pole-mounted solar energy systems. In contrast, the requirement for a special permit would apply throughout the town.

In general, in Massachusetts, if an activity is not listed in a town's zoning bylaws, then it is not allowed; but there is an exception for "customary and incidental" accessory buildings. Solar panels on roofs clearly fall into this category, and probably so do ground-mounted systems since they have been being installed across the Commonwealth and in Richmond.

Mr. Bell asked whether building permits were required for ground-mounted solar systems. Mr. Hanson said that they were, to ensure that electrical codes and such were met.

Mr. Hanson said that the main questions the Board should focus on were whether special permits should be required and, if so, for what sized system. How big a structure could someone build before there was a complaint or someone sued the town for allowing it? In drafting his proposal, he had avoided the terms small-, medium-, and large-sized because they were confusing. Ms. Keenum observed that they could be defined in the bylaw just as the DOER guidelines recommended.

From this point on, the Board discussed the draft solar bylaw in detail. Mr. Hanson explained to the new members that when reviewing such a draft, the Board members reached consensus on points without formal votes on each change or deletion. The consensus reached on points under discussion were:

- The property owner's intention in installing a solar energy system was not pertinent to zoning, nor would it be feasible to limit the amount of electricity generated, and therefore the words "A Solar Energy System whose function is to provide electric power to meet the needs of the primary use" should be deleted from Section 4.8.B.17.
- The maximum size of a ground-mounted solar array by right would remain 750 square feet and therefore Section 4.8.B.17.b should remain unchanged.
- Special permits would be required for any solar energy system with a project area larger than 750 square feet and Section 4.8.B.17.c should remain unchanged.
- The maximum height of solar collectors (Section 13.2.2) was raised to 20 feet.
- The phrase "with native noninvasive species" was struck from the revegetation requirement (Section 13.3.2) because, as Mr. Bruce observed, state law covers invasive species.
- Section 13.2.4 on fences was deleted altogether.
- Section 13.2.5 on plantings/seed mixes was deleted altogether.

Mr. Bell made a motion that the solar bylaw as amended should be approved and presented to the town at a public hearing on March 11, 2019. Ms. Keenum seconded. The vote to approve was unanimous, 5-0.

3. As discussed at the meeting of January 11, 2019, Mr. Hanson proposed that the Planning Board should become the SPGA for Section 4.8.B.11.b (Accessory buildings or buildings exceeding 20 feet in height or buildings that exceed one half the total area of the dwelling on the premises or having a total aggregate floor area of more than 1,000 square feet). No one objected. Mr. Hanson therefore made a motion to hold a public hearing on March 11, 2019, on

a proposal that the Planning Board should review special permit applications under Section 4.8.B.11.b. Mr. Bell seconded the motion. The vote was unanimous 5–0.

As an action item, Mr. Hanson undertook to post the required notices for the two hearings scheduled. He adjourned the meeting at 8:11 P.M.

Respectfully submitted,  
Katherine Keenum, Clerk

Exhibit 1 Solar Bylaw proposal (rev 3)

Draft 1/14/2019

Article : Solar Energy Systems

To see if the Town will vote to amend the Zoning Bylaw by adding a new Section 13, Accessory Ground-Mounted Solar Energy Systems, and revising Section 4.8 A and Section 4.8 B.

The Purpose of the Amendment is to add reasonable regulations for solar energy systems of all sizes throughout the Town and bring Richmond's zoning bylaws into conformance with state law.

	<u>DISTRICTS</u>
Section 4.8 A. PERMITTED PRINCIPAL USES	RA-A
Continued:	<u>RA-C SR COMM1&amp;2</u>

17. Commercial Scale Ground-Mounted Solar Photovoltaic Installations with less than 250 kW of rated nameplate capacity.	NO	NO	SPP
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	<u>DISTRICTS</u>
Section 4.8 B. PERMITTED ACCESSORY USES	RA-A
Continued:	<u>RA-C SR COMM 1&amp;2</u>

17. Accessory SOLAR ENERGY SYSTEMS

A Solar Energy System whose function is to provide electric power to meet the needs of the primary use.

a) A Solar Energy System that is structurally mounted to the roof or side of a permitted building, provided the front yard, side yard, and rear yard setbacks are met. Any roof-mounted system shall not exceed the maximum building height for the district in which the building is located.	YES	YES	YES
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b) A Solar Energy System that is structurally mounted to the ground with project area of less than 750 square feet provide the requirements of Section 13 of this by-law are met.	YES	YES	YES
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- c) A Solar Energy System that is            SPP    NO    SPP
- structurally mounted to the ground with project area greater than 750 square feet provided the requirements of Section 13 of this by-law are met.

### Section 13. Accessory Ground-Mounted SOLAR ENERGY SYSTEMS

#### 13.1 Purpose. The purpose of this Section is to:

1. Provide reasonable regulations to govern Accessory Ground-Mounted Solar Energy Systems in order to regulate the size, placement, design, and construction, of such installations;
2. Minimize the impact on and loss of scenic, natural, agricultural and historic resources, and the character of residential neighborhoods;
3. Protect public health, safety, and welfare.

#### 13.2 Dimensional Regulations.

1. Setbacks: A ground mounted solar energy system shall not be located within the front, side, or rear yard setback required in the zoning district in which the system is located.
2. Height: The maximum height of the solar collectors, including supporting structures, at their highest point, shall not exceed 15 feet.

#### 13.3 Design and Performance Standards. Accessory Ground-Mounted solar energy systems shall comply with the following standards:

1. Visual Impact. Reasonable efforts shall be made to minimize visual impact from public rights of way and abutting properties. Dense vegetation is the preferred method of screening.
2. Land Clearing, Soil Erosion and Habitat Impacts. Clearing of natural vegetation shall be minimized. Areas of clearing shall be revegetated with native noninvasive species.
3. Utility Lines. Any utility lines between a solar energy system and the primary use structure shall be underground to the extent feasible.
4. Fences: The maximum height of perimeter fences shall not exceed 8 feet unless they provide visual screening approved by the Planning Board. All perimeter fences shall have a clearance of six (6) inches between the bottom of the fence and the ground.

5. Plantings / seed mix: All proposed landscaping and revegetation shall be with native noninvasive species and seed mixes that are pollinator and habitat friendly and do not require the use of pesticides or herbicides.

13.4 Special Permit Required - Solar energy systems requiring a special permit shall meet the following requirements:

In addition to the standard special permit application requirements of section 6.3, a special permit application for any solar energy system shall also include a site plan with the following:

- a. Property lines and physical features, including roads, for the project site;
- b. Proposed changes to the landscape of the site, grading, vegetation clearing and planting, exterior lighting, screening vegetation or structures;
- c. Blueprints or drawings of the solar energy system showing the proposed layout of the system, any potential shading from nearby structures, the distance between the proposed solar collector and all property lines and existing on-site buildings and structures, and the tallest finished height of the solar collector;
- d. Documentation of the major system components to be used, including the panels, mounting system, and inverter;
- e. Name, address, and contact information for proposed system installer; Name, address, phone number and signature of the project proponent, as well as all co-proponents or property owners, if any;

13.5 Definitions:

**PHOTOVOLTAIC SYSTEM (ALSO REFERRED TO AS PHOTOVOLTAIC INSTALLATION):** An active solar energy system that converts solar energy directly into electricity.

**PROJECT AREA:** The land area required to accommodate and support the installation and operation of a solar energy system; typically, the land which is enclosed within the line of a perimeter fence that encloses the solar energy system and its accessory components or, if there is no fence, the projected foot print area on the ground covered by the installation. The project area shall include the cumulative area of all separate ground mounted installations on the same lot or adjacent lot.

**SOLAR COLLECTOR:** A device, structure or a part of a device or structure for which the primary purpose is to transform solar radiant energy into thermal, mechanical, chemical, or electrical energy.

**SOLAR ENERGY:** Radiant energy received from the sun that can be collected in the form of heat or light by a solar collector.

**SOLAR ENERGY SYSTEM:** A device or structural design feature for the collection, storage and distribution of solar energy for space heating or cooling, electricity generation, or water heating.

**SOLAR ENERGY SYSTEM, ACCESSORY USE:** A Solar Energy System whose function is to provide electric power to meet the needs of the primary use.

**SOLAR ENERGY SYSTEM, GROUND-MOUNTED:** A Solar Energy System that is structurally mounted to the ground and is not roof-mounted.

**SOLAR ENERGY SYSTEM, ROOF-MOUNTED:** A Solar Energy System that is structurally mounted to the roof or side of a building

**SOLAR ENERGY SYSTEM, COMMERCIAL SCALE:** A Solar Energy System in excess of 750 square feet project area that is not an Accessory Use system.

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

Exhibit 2 Memo from Keenum to Board members

M E M O R A N D U M

To: John Hanson, Rick Bell, Doug Bruce, Pete Lopez, Mark Pruhenski  
 From: Katherine Keenum  
 Subject: Comments and queries on Solar By-Law Rev3  
 Date: February 10, 2019

After reviewing the Draft Solar By-Law (Rev 3) that will be discussed at the Planning Board meeting of February 11, 2019, I have some comments and queries. I come at the issue primarily from the perspective of an environmentalist deeply worried about global warming. Other members will have other concerns, and we all know that it is important to present the town with an article that can be (a) understood and (b) approved by a majority of the voters. But I hope the issues I raise will help shape a bylaw that contributes to Richmond's future as the climate, technologies, and people's sensibilities undergo change.

1. At Section 4.8 B.17 PERMITTED ACCESSORY USES, I would alter the wording to cover activity encouraged by Mass. General Law, Chapter 40A Section 3 and Richmond's policy of being a Green Community. For example:

A Solar Energy System whose function is to provide electric power to meet the needs of the primary use behind the meter or to supply electric power to the grid in front of the meter or both.

2. At Section 4.8 B.17.b, the restriction of by-right installations to only 750 square feet when the state defines a small PV system as up to 1,750 square feet seems at odds with Chapter 40A Section 3 and Charlie Baker's Congressional testimony calling for everyone to do what they can to fight global warming on the international, national, and local level. Localities are allowed to define "small ground-mounted solar energy systems" at less than the maximum, but it seems to me that we should not cut the 1,750 square feet by more than half.

3. Beginning at Section 4.8 B.17.c, should we require Special Permits for accessory-use installations? The Massachusetts Department of Energy Resources advises against it:

Allowable Use. In DOER's interpretation, roof-mounted and small- and medium-scale ground-mounted solar energy systems cannot be prohibited as a use within a Zoning Bylaw/Ordinance. **Because Special Permits explicitly provide the option to deny an application, the Special Permit process is not a viable choice for regulating these systems.** It is DOER's further interpretation that roof-mounted and small- and medium-scale ground-mounted solar energy systems must be allowed by-right in order to comply with Chapter 40A Section 3. A municipality may review these systems as part of Site Plan Review (see "Unreasonable Regulation" below).

Policy Guidance for Regulating Solar Energy Systems, p. 4 (emphasis mine)

Unreasonable Regulation. A Zoning Bylaw/Ordinance may provide performance standards for the installation of small-, medium- and large-scale ground-mounted and roof-mounted solar energy systems, which can be reviewed by the Zoning Enforcement Officer or through Site Plan Review. However, if the application of these standards would effectively preclude the installation from happening, this could violate state law unless the protection of "public health, safety or welfare" is being advanced.

Ibid, p. 5

<https://www.mass.gov/files/documents/2017/10/16/model-solar-zoning-guidance.pdf>

In keeping with Richmond's status as a Green Community, it might be preferable to expedite applications through the less onerous mechanism of Site Plan Reviews. (If so, see appendix below with an example from the DOER of a Site Plan Review Provision)

4. At Section 13.2.2 why restrict height to 15 feet. Should the maximum height of a ground-mounted installation be at least 20 feet like other accessory structures (see Richmond Zoning By-Law, Sec. 4.8.b.11.a)—or even higher? The Massachusetts Department of Energy Resources advises:

It is recommended that for purposes of height, roof-mounted solar energy systems should be considered similar to chimneys, television antennae, roof-top mechanical equipment and other appurtenances that are usually either allowed a much higher maximum height (e.g., 100 feet instead of 35 feet) or are exempted altogether from building height requirements. ...

It is recommended that existing zoning district height limitations apply for all ground-mounted solar energy systems. If the ground-mounted solar energy system is accessory to a principal building or structure on a lot, then the height restriction for accessory structures would apply.

Model Zoning for the Regulation of Solar Energy Systems, pp. 7-8

<https://www.mass.gov/files/documents/2016/08/nc/model-solar-zoning.pdf>

5. In considering allowable heights, do we want to take into account the advantages of pole-mounted technologies and canopy arrays that are high enough for sheep, goats, and cattle to graze beneath?

6. At Section 13.3, Design and Performance Standards, should we take into account whether the surface beneath a ground-mounted installation will be pervious or impervious? The DOER advises:

[I]t is recommended that solar energy systems with grass or another pervious surface under them be exempted from lot coverage or impervious surface calculations. If the area is to be paved or otherwise rendered impervious then this land area should in fact count toward any coverage or impervious surface limit.

Ibid., p. 9

7. At 13.3.4. What is the rationale for legally limiting the height of a perimeter fence to eight feet or requiring six-inch clearance at the bottom? (It's hard to imagine anyone putting up a taller fence!) Do we need to address fences at all?

8. Should we consult with the Fire Department about any safety regulations they might want to see included?

## Appendix

### Excerpt

Model Zoning for the Regulation of Solar Energy Systems  
 Department of Energy Resources  
 Massachusetts Executive Office of Energy and Environmental Affairs  
 December 2014

Example 3 (Site Plan Review provisions for roof-mounted and small-scale ground-mounted solar energy systems as part of a larger project that triggers Site Plan Review):

#### 1.0 Site Plan Review

##### 1.1 Site Plan Document Requirements

1.1.1 Requirements for Roof-Mounted and Small-Scale Ground-Mounted Solar Energy Systems - Where these solar energy systems may be accessory to a use allowed through Site Plan Review, the Site Plan Review shall include review of their adequacy, location, arrangement, size, design, and general site compatibility.

1. 1.1.1.1 Roof-Mounted Solar Energy Systems – For all roof-mounted systems, the applicant shall provide:
  1. (a) The shortest distance between the solar collector and all edges of the roof.
  2. (b) The distance between the solar collector and any other existing rooftop features such as chimneys, spires, access points, etc.
  3. (c) The height of the solar collector both from finished grade and, where applicable, from the finished surface of the roof.
2. 1.1.1.2 Small-Scale Ground-Mounted Solar Energy Systems – For all ground-mounted systems, the applicant shall provide:
  1. (a) The distance between the proposed solar collector and all property lines and existing on-site buildings and structures.
  2. (b) The tallest finished height of the solar collector.
  3. (c) Proposed changes to the landscape of the site, grading, vegetation clearing and planting, exterior lighting, screening vegetation or structures.
3. 1.1.1.3 System Components – The Plan must include documentation of the major system components to be used, for example the panels, mounting system, and inverter.
4. 1.1.1.4 Installer Details – The Plan must include the name, address, and contact information for proposed system installer.

##### 1.2 Site Plan Review Design Standards

###### 1.2.1 Standards for roof-mounted and small-scale ground-mounted solar energy systems

1. 1.2.1.1 Utility Notification - No grid-intertie photovoltaic system shall be installed until evidence has been given to the Site Plan Review Authority that the owner has submitted notification to the utility company of the customer's intent to install an interconnected customer-owned generator. Off-grid systems are exempt from this requirement.
2. 1.2.1.2 Emergency Access - Solar energy systems shall be located in such a manner as to ensure emergency access to the roof, provide pathways to specific areas of the roof, provide for smoke ventilation opportunities, and provide emergency egress from the roof.
  1. (a) For buildings with pitched roofs, solar collectors shall be located in a manner that provides a minimum of one three-foot wide clear access pathway from the eave to the ridge on each roof slope where solar energy systems are located as well as one three-foot smoke ventilation buffer along the ridge.
  2. (b) Residential rooftops that are flat shall have a minimum three-foot wide clear perimeter and commercial buildings that are flat shall have a minimum four-foot wide clear perimeter between a solar energy system and the roofline, as well as a three-foot wide clear perimeter around roof-mounted equipment such as HVAC units.
  3. (c) To the extent practicable, the access pathway shall be located at a structurally strong location on the building (such as a bearing wall).
3. 1.2.1.3 Safety – No roof-mounted solar energy system shall be located in a manner that would cause the shedding of ice or snow from the roof into a porch, stairwell or pedestrian travel area.

Commentary: Building and Fire Department personnel should be involved in the development of emergency access standards, and any zoning standards that are adopted should be consistent with local building and fire codes.

