



TOWN OF WATERTOWN
Department of
Community Development and Planning
PLANNING BOARD

Administration Building
149 Main Street
Watertown, MA 02472
Phone: 617-972-6417
Fax: 617-972-6484
www.watertown-ma.gov

Board Members:
John B. Hawes, Jr., Chairman
Jeffrey W. Brown
Janet Buck
Gary Shaw
Payson R. Whitney, III

PLANNING BOARD REPORT

This Report provides the Planning Board's recommendation to the Honorable Town Council for the Council's public hearing on a Zoning Text Amendment for Solar Energy Systems.

ZONING AMENDMENT:

New Section 8.05, and amend Section 9.03(a), to for a updated Solar Energy System Assessment

- Require projects of 10,000 s.f. or more or 10 or more residential units to include a solar energy system equivalent to 50% of the roof area of buildings as well as 90% of uncovered area of parking structures

- Provide exemptions for a lack of a solar-zone or for load feasibility

- Section 5.04: Amend/clarify that solar systems are not included in Building Coverage or Impervious Cover

DATE OF FIRST READING:

September 11, 2018

DATE OF PLANNING BOARD HEARING:

October 10, 2018

PLANNING BOARD RECOMMENDATION:

Recommend Adoption (5-0)

I. PUBLIC NOTICE

A. Procedural Summary:

As required by the Watertown Zoning Ordinance § 9.22, notice of the Planning Board's October 10, 2018 hearing was given as follows:

- Published in the newspaper of record (Watertown Tab) on 9/21/2018 & 9/28/2018;
- Posted at the Town Administration Building on 9/17/2018; and,
- Mailed to parties of interest on 9/17/2018

B. Public Notice:

*“The Watertown Planning Board will hold a public hearing on Zoning Ordinance (WZO) Amendments on Wednesday, October 10, 2018, starting at 7:00 p.m. in the Town Council Chamber, Administration Building, 149 Main Street, Watertown, MA 02472, to consider amendments to the WZO. **Solar Requirement:** Amend Article VIII/Other Regulations to add a new Section 8.05, and amend Section 9.03(a), third paragraph, to require an updated Solar Energy System Assessment, as required under the new Section 8.05:*

- *Require projects of 10,000 s.f. or more or 10 residential units to include a solar energy system on 50% of the roof area of buildings and 90% of uncovered area of parking structures,*
- *Provide exemptions for a lack of a solar-zone or for load feasibility, and*
- *Section 5.04: Amend/clarify that solar systems are not included in Building Coverage or Impervious Cover”*

Town Council Hearing:

*Notice is hereby given that the City known as the Town of Watertown will conduct a PUBLIC HEARING before the Town Council on proposed AMENDMENTS TO THE ZONING ORDINANCE. The Hearing will be held on **Tuesday, November 27, 2018 at a meeting starting at 7:15 PM** in the Town Council Chamber, Administration Building, 149 Main Street, Watertown, MA 02472.*

3. Solar Requirement: *Create new Section 8.05, amend Section 9.03, Section 5.04 and other Sections as necessary to require renewable energy systems for certain projects requiring Site Plan Review.*

(published 11/9/2018 and 11/16/2018 and posted 11/6/2018)

II. DESCRIPTION

A. Nature of the Request

The proposed Text Amendment would amend *Article VIII/Other Regulations* to add a new Section 8.05, and amend Section 9.03(a), third paragraph, to require a Solar Energy System Assessment and installation of solar (equivalent of 50% of roofs as well as 90% of garages) for projects requiring Site Plan Review with 10,000 s.f. and greater and/or 10 or more residential units. It would also clarify that solar systems are not included in Building Coverage or Impervious Cover.

II. PUBLIC COMMENTS AND PLANNING BOARD DISCUSSION

In response to a Board Member question, Joslyn Taggart said if someone wanted to have a green roof, they could put the solar array over the parking area, leaving the roof available to be a “green roof.” Or, vice versa. Or, the green roof could go under the panels.

Mr. Ed Lewis, Watertown’s Energy Manager, supports the Amendment. He said this amendment closes the loop on projects doing a solar assessment, but not following through on installation of a solar array. The Amendment is in line with new requirements coming into effect

as a result of the State Building Code and noted that developers have options that could make it a zero-cost option for them. The requirement also increases the sustainability of Watertown's buildings and gives developers a new marketing tool. Installation of solar is generally a local employment and economic multiplier.

Ms. Day asked if the proposed Text Amendment would also apply to municipal buildings, noting the Town has several large construction projects scheduled. Mr. Magoon said municipal buildings will attempt to comply with the same requirements.

III. ANALYSIS

Comprehensive Plan Consistency

Chapter 10 of the Comprehensive Plan seeks to promote alternative energy sources throughout Watertown. An emphasis is placed on Zoning for Energy Efficiency, with recommendations that the Zoning Ordinance be reviewed on an ongoing basis for ways to support energy efficiency, including that *"height and coverage restrictions do not preclude future development of solar installations..."* In addition, Goal 2 seeks to *"Establish incentives and programs for energy efficiency and renewable energy in new development and existing structures."* The proposed Text Amendment is consistent with and supports increased energy efficiency and use of alternative energy (solar systems) in Watertown.

Current Solar Requirements in Zoning

Watertown's Zoning Ordinance (WZO) references solar within the definitions and in regard to Site Plan Review. There is a requirement for a solar assessment and a report on what actions, if any, will be taken for certain projects (Projects in Commercial, Mixed Use, and Industrial zoning districts 10,000 square feet and greater or with 10 or more residential units).

Proposed New Text

The Amendment would add a new Section 8.05 which includes definitions of a Solar Energy System under Article VIII/Other Regulations. Currently, the WZO only sets parameters for where (in which Zoning Districts) a solar assessment is required. The proposed language identifies that the assessment is a tool and also requires projects to install a Solar Energy System.

The Text Amendment also proposes to modify Section 9.03(a), to require a Solar Energy System Assessment, as required under the new Section 8.05. This includes language that projects of 10,000 square feet or more or 10 residential units would need to provide a Solar Energy System. The requirement recommend by the Planning Board was an equivalent of 50% of the roof area of buildings as well as 90% of uncovered area of parking structures, unless sites are exempted because of solar access issues or load feasibility constraints.

IV. PLANNING BOARD DELIBERATION

Mr. Whitney asked if the height of the solar panels would be included in the height of any structure? Mr. Schreiber said the Zoning Ordinance already exempts up to 15 feet for certain things on the roof, such as solar canopies and elevator penthouses. He noted this would also be reviewed as part of the permit process. Mr. Magoon noted that parking structures are already expensive to build. He said setting the height at "x" and counting the solar canopy against that

has the effect of penalizing the solar canopy. Mr. Schreiber noted a solar structure over a garage floor helps with stormwater and snow management.

Ms. Buck said her view was that a solar array would be rooftop equipment.

Mr. Cohen said how would this requirement deal with “green roofs”? Would that be precluded? Mr. Schreiber said the “remaining” 50% of the roof could accommodate a green roof, or it could be under the solar installation, if it was for stormwater management.

Ms. Buck moved to recommend that the Town Council approve the proposed language as submitted in the Staff Report for updating the Zoning Ordinance to require a Solar Energy System Assessment.

Mr. Whitney seconded the motion, which passed unanimously (5-0).

I. Note: Amend Section 9.03(a) to reference a new Section for Solar Energy Systems and its requirements:

SECTION 9.03(a) (Third Paragraph)

Development in the NB, LB, CB, I-1, I-2, I-3, RMUD, and PSCD Districts greater than or equal to ten thousand (10,000) gross square feet or containing ten (10) or more residential units shall have **complete** an **Solar Energy System Assessment, as required under Section 8.05**~~energy assessment completed to determine the viability of a rooftop photovoltaic system.~~ The Petitioner shall indicate, in writing, what actions/outcomes will be taken with a copy of the assessment, to DCDP.

II. The following language would be a new Section under Article VII - Other Regulations

8.05 Solar Energy Systems

(a) Definitions:

1. Solar Energy System: A device or structural design feature, a substantial purpose of which is to provide for the collection, storage and distribution of solar energy for space heating or cooling, electricity generation, or water heating.
 - a. Solar Energy System, Active: A solar energy system whose primary purpose is to harvest energy by transforming solar energy into another form of energy or transferring heat from a collector to another medium using mechanical, electrical, or chemical means.
 - b. Solar Energy System, Ground-Mounted / Canopy: An Active Solar Energy System that is structurally mounted to the ground and is not roof-mounted.
 - c. Solar Energy System, Roof-Mounted: An Active Solar Energy System that is structurally mounted to the roof of a building or structure.
2. Solar-ready zone: The solar-ready zone area is 50% of the roof area that is either flat or oriented between 110 degrees and 270 degrees of true north, exclusive of mandatory access or set back areas as required by the MA Fire Code.

(b) Requirements:

Development requiring site plan review approval under section 9.03 in the NB, LB, CB, I-1, I-2, I-3, RMUD, and PSCD Districts greater than or equal to ten thousand (10,000) gross square feet or containing ten (10) or more residential units shall include a solar energy system that is equivalent to a minimum of 50% of the roof area of all buildings. In cases where a site includes an uncovered parking structure the structure shall also have a solar energy system installed to cover a minimum of 90% of its top level.

(c) Solar Energy System Assessment:

A solar assessment shall be submitted and the assessment must include, at a minimum:

1. An analysis for solar energy system(s) for the site detailing layout and annual production.
2. Include the maximum feasible solar zone area of all structures and potential ground-mounted canopies.
3. An initial solar energy system assessment shall be submitted with the required application for Site Plan Review under section 9.03
4. A final solar installation plan must be reviewed and approved by the Department of Community Development and Planning, prior to the issuance of a Building Permit

(d) Exemptions:

A project will not be required to install a solar energy system on the roof when there is no solar ready zone, or the solar-ready zone is shaded for more than 50 percent of daylight hours annually, or for building conversions with insufficient structural load capacity. Further, in the case of a mixed or ground mounted installation the requirement may be reduced or waived if the assessment determines there is not a viable location to meet the solar requirement.

(e) Safety and Locations Guidelines:

1. 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, as required by the MA Fire Code, as updated.
2. 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.

III. Proposed language to clarify solar canopy installation by adding the following notes in Section 5.04 – Dimensional Regulations.

Coverage: Solar energy systems shall not be included in calculations for building coverage or impervious cover as identified in Section 5.04 – Table of Dimensional Regulations.