TOWN OF PORTSMOUTH
PLANNING BOARD
2200 East Main Road
Portsmouth, RI 02871
401-683-3717

ADVISORY OPINION

Applicant: Cort Chappell

Relief/approval requested: Amend the Zoning Ordinance to include a Solar Energy Ordinance.

The Planning Board received comments concerning the request at a legally noticed public informational meeting held on November 13, 2019.

Planning Board members present at the November 13, 2019 hearing : Guy Bissonnette, Kathleen Wilson, Luke Harding, , David Garceau and Edward Lopes

Atty. Cort Chappell, Chappell & Chappell, 171 Chase Road, Portsmouth and Assistant Town Planner, Michael Asciola appeared with a request for an advisory opinion to the Town Council for a change to the Zoning Ordinance to include a Solar Energy Ordinance. They presented a draft of the proposed amendment attached as Exhibit A which included the Planning Board comments from the previous planning board meeting held on October 9, 2019. After discussing the various elements of solar energy development, a motion was made to accept the proposed solar energy amendment.

MOTION: A motion was made and seconded to make a favorable advisory opinion to the Portsmouth Town Council for a proposed Zoning Ordinance Amendment to include the attached proposed solar energy amendment.

All in favor. So voted.

Portsmouth Planning Board
By:

Leon C Lesinski

Leon C. Lesinski
Administrative Officer

Date: November 19, 2018

EXHIBIT A

Solar Energy Systems Zoning Ordinance Amendments

As recommended for adoption by the Planning Board on November 13, 2019

Chapter 405. Zoning

Article V. Use Regulations

6. If designated in the Tables by the letter "M", the use is permitted with the approval of the Major Land Development Review by the Planning Board subject to such restrictions as set forth elsewhere in this Ordinance and such further restrictions as said Board may establish.

	R10	R20	R30	R40	R60	C-1	I-L	I-H	WD	TC
J. Solar Energy Systems (Article XX)										
1. Large Solar Energy System	S	S	S	S	S	M	M	M	M	N
2. Medium Solar Energy System	S	S	S	S	S	M	M	M	M	N
3. Small Solar Energy System	S	S	S	P	P	P	P	P	P	S
4. Accessory Roof Mounted Solar Energy System	P	P	P	P	P	P	P	P	P	P

Article VII. Special Use Permits

Section A. General.

1. A Special Use Permit is required for the following uses:

m) Solar Energy Systems, as specified in Article V. Section J.

Section B. Procedures.

2. The Zoning Enforcement Officer shall immediately transmit said completed application to the Zoning Board of Review and, if required by the provisions of this Article, shall transmit a copy of each application to the Planning Board and the Design Review Board. Planning Board and Design

Review Board review and procedures for this purpose are further defined in Article XI. Development Plan Review.

a) This provision shall apply to all non-residential developments and multi-family developments designated with an "S" (Special Use Permit) ~~in the C-1, TC-C and I-L Zones~~ in Article V herein.

Article XX Solar Energy Systems (SES)

Section A. Purpose and Intent

The Town Council finds that it is in the public interest and will ensure the health, safety, and welfare of the community through the safe, effective and efficient use of Solar Energy Systems (SES) that minimize impacts on scenic, natural, cultural resources, increase resiliency, reduce the use of and reliance on fossil fuels for power production, reduce carbon and other greenhouse gas emissions of utility-supplied electric energy, and provide clean, domestically-sourced alternatives to our existing energy supply.

The purpose of this section is to permit and facilitate appropriately -scaled solar energy systems and to establish criteria and development standards that maximize their effectiveness and efficiency while addressing potential negative impacts in various zones throughout Town. A Solar Energy System is a method of generating electrical power by converting solar radiation into direct current electricity using semiconductors that exhibit the photovoltaic effect. Photovoltaic power generation employs solar panels composed of a number of solar cells containing a photovoltaic material.

Section B. Permits Required

All solar energy systems shall require reviews, and approvals as outlined in this Ordinance. Solar energy systems must be consistent with all applicable State and Federal fire and electrical safety codes and shall obtain all necessary statewide solar, building, and electrical permits from the Building Official prior to commencement of construction.

Section C. SES Classifications

There are (4) categories of Solar Energy Systems contemplated by this zoning ordinance, and they are as follows:

1. Roof-Mounted System: a solar energy system that is accessory to a primary structure. An accessory roof-mounted system shall be installed only on the roof of a structure.

2. Small SES: a ground mounted solar energy system that is an accessory use to the primary structure use. A small system shall consist of no more than 1,600 square feet of solar panel surface area.

3. Medium SES: a ground mounted solar energy system that is the primary use or an accessory use of a lot or lots which may be designed to produce more energy than consumed by the primary use of the property as a secondary use. A medium system shall consist of more than 1,600 square feet of solar panel surface area, but equal to or less than 40,000 square feet of solar panel surface area.

4. Large SES: a ground mounted solar energy system that is the primary use or an accessory use of a lot or lots which may be designed to produce more energy than consumed by the primary use of a lot or lots as a secondary use. A large system shall consist of more than 40,000 square feet of solar panel surface area.

Section D. District Use Regulations

See Article V. Section J.

Section E. SES Dimensional Requirements

1. Height Requirement:

   a. Ground Mounted SES - The maximum height must not exceed twelve (12) feet from existing grade.
   b. Building Mounted SES - The total height of the building and photovoltaic panel must not exceed the maximum building height regulation for the zoning district per Article IV Section B.

2. Yard Setbacks and Vegetative Buffer Area Requirements:

   a. Small SES: Yard setback areas are as required by Article IV, Section B Land Use Requirement Table.

   b. Medium and Large SES:

      i. Yard setback areas must maintain fifty (50') foot minimum setbacks on all sides. Where this standard conflicts with the requirements of yard setbacks in Article IV section B, this standard is to supersede.

      ii. Vegetated buffer areas must be a minimum of thirty (30') feet within the yard setback where abutting residential and Town Center (C-TC) zones and a minimum of twenty (20') feet within the yard setback where abutting all other zones.

3. Lot Coverage:

a. Small SES: The lot coverage for a small system shall follow the individual zoning district regulations. The lot coverage calculations will be a sum of the area of each individual panel's outer dimensions as if lying flat on the ground plus the footprints of all other countable structures under this ordinance.

b. Medium and Large SES: Medium and large systems shall meet the setback and screening requirements, and site plan review, otherwise there is no lot coverage limitation. This exemption is not intended to apply to municipal stormwater regulations, as the panels could have the effect of altering volume, velocity, and discharge pattern of stormwater runoff.

Section F. Medium and Large SES Application Requirements

The applicant shall provide the following documents, which are generally those of the Zoning Board of Review petition or the Planning Board's Major Land Development Review checklists, provided however, that the applicable board may, at its discretion, waive any document requirement or ask for more information as it deems appropriate based upon the submission of the applicant.

1. **Narrative Report** - The applicant shall provide a summary narrative report containing:

   a. Name, address and contact information for proposed system installer, system operator, landowner, applicant, and designated agents representing the project.

   b. A project construction schedule.

   c. An operation and maintenance plan.

   d. A rendering or photo simulation showing the proposed completed project with landscaping.

   e. Evidence of compliance with any applicable state environmental regulations and state permits.

   f. An emergency response plan for public safety officials.

   g. A decommissioning / restoration plan and proposed financial security (with supporting calculations).

   h. A landscape plan showing seeding / vegetation plan for the project and maintenance schedule.

   i. Evidence that a preliminary interconnection feasibility study is underway and a copy of the application with the electric distribution company.

   j. An estimation of annual taxation revenue.

k. List of abutters: By name, address, map and lot numbers (include all parcels within 200 ft. of the subject property).

l. Locus map with aerial imagery showing 1,000 feet surrounding the site.

2. **Development Plans** - All plans related to design, construction, installation or modification of a SES shall be prepared, signed and stamped by either a Rhode Island professional engineer, a Rhode Island registered land surveyor (for property line information), and/or a Rhode Island registered landscape architect (for landscape information). In addition, to the checklist requirements for the various stages of Development Plan Review and/or Major Land Development Review, site plans shall show the following information:

a. Class I survey site plan showing: Property lines and all physical features for the project site.

b. Proposed changes to the landscape of the site, temporary and permanent limits of disturbance, grading, vegetation clearing and planting, exterior lighting, access points, emergency access provisions, fencing, screening vegetation and/or structures.

c. Blueprints or drawings of the entire SES showing the proposed layout of the system.

d. One- and or three-line electrical diagrams detailing the SES, associated components and electrical interconnection methods, with all current state electrical code compliant disconnects and over current devices.

e. Documentation and or equipment specification sheets of the major system components to be used, including the solar panels, mounting system and inverter.

Section G. Medium and Large SES Siting Requirements

1. **Site Design**

a. General Siting: Solar energy systems shall be located, constructed, installed, and operated to minimize potentially adverse impacts to nearby properties, natural resources, and or individuals. Impacts to be minimized include, but are not limited to, those locations and habitats for animals, including birds, and plant species of concern, and habitat/forest fragmentation.

b. Industry Standards: Solar energy systems shall be manufactured and designed to comply with applicable industry standards, as may amended for time to time, including but not limited to, the American National Standards Institute (ANSI), Underwriters Laboratories

(UL), the American Society for Testing and Materials (ASTM), and other appropriate certifying organizations as may be required by Federal, or State Laws or utility regulations.

c. Interconnection: Solar energy systems connecting directly to a distribution or a transmission system must submit a copy of the preliminary interconnection study with the electric distribution company. Any off-site impacts or infrastructure upgrades necessary to enable the SES shall be identified, especially any impacts to existing street trees within the connection and/or affected municipal rights-of-way. Where such street trees may be impacted, the Tree Warden or Tree Commission shall submit an advisory opinion on the extent of the off-site impacts and a recommendation for mitigation of the impacts.

d. Land Clearing: Wherever practical clearing of natural vegetation shall be limited to what is necessary for the construction, operation, and maintenance of the solar energy system or otherwise prescribed by the applicable laws, regulations, and ordinances. The disturbance and removal of topsoil from the site shall be limited to those areas that are required for the installation of the proposed solar energy system. The applicant shall utilize existing cleared land or that which minimizes the impact on forest and habitat.

e. Security Fencing: Medium and Large solar energy systems shall surround the perimeter of the installation with no less than six (6') feet in height of fencing. Where fencing is used, consideration for small and large terrestrial wildlife shall be incorporated into the fencing design. Fences shall be elevated above grade by a minimum of five inches to allow for passage of small terrestrial animals. Barbed wire fences shall not be permitted.

f. Buffer Areas and Screening - Natural vegetation or additional landscape screening shall be provided as determined by the Zoning Board of Review or Planning Board depending upon the existing land use on the site and the adequacy of the site's natural vegetation or lack thereof to mitigate impacts to public views, scenic roads, and abutters. The Zoning Board of Review or Planning Board shall have the authority to set site specific width of buffers, height of plants at planting, and to require an opaque screen to adjacent properties and/or public roads. If required by the Zoning Board of Review or Planning Board the landscape plan shall be prepared by a registered landscape architect.

g. Groundcover and Plant Species Selection: Pollinator friendly seed mixtures shall be used along with native plants to the maximum extent possible. All plants and seeds should be native to the greatest extent practicable, and no plants known or suspected (e.g. aggressive spreading non-natives) to be invasive shall be used.

h. Agricultural Accessory Use: For installations on agricultural lands, the entire lot should be examined by the Zoning Board of Review or Planning Board and farm owner with areas designated within the total acreage for farming use, buffers, and SES shall be located as to minimize impact to prime agricultural soils or soils of statewide importance wherever possible. No topsoil or prime agricultural soil shall be removed from the site for

installation of the facility. All soils retained shall be reused in the landscaping/ vegetative plan for the site.

i. Lighting: Exterior lighting within the SES shall be the minimum necessary. All fixtures must be full-cut off fixtures approved by the International Dark Sky Association and correlated color temperatures ≤3000K for bulbs.

j. Signage: Signs shall comply with the Portsmouth Sign Ordinance. Ground mounted systems shall identify the owner and provide a twenty-four (24) hour emergency contact phone number. Solar energy systems shall not be used for displaying any advertising except for the identification of the manufacturer or operator of the solar energy system.

k. Power Lines: Power and communication lines running between banks of solar panels and to the off-site electric distribution system or interconnections with buildings onsite excepting, the poles owned by the electric distribution company which are typically required to be above ground, shall be buried underground. Exemptions may be granted by the Zoning Board of Review or Planning Board in instances where written documentation for shallow bedrock, a high groundwater table, prior environmental contamination or other elements of the natural landscape interfere with the ability to bury lines.

2. **Operating Standards**

a. Site control: The applicant shall submit documentation for access and control of the project site sufficient to allow for the construction and operation of the proposed energy system.

b. Stormwater and Erosion Control: All SES are subject to the soil erosion and sediment control ordinance as well as the storm water control provisions of the Subdivision and Land Development Regulations.

c. Pesticide and Herbicide Usage: Solar energy systems shall be designed, constructed and maintained in a way that minimizes the use of herbicides and pesticides.

d. Modifications: Material (equipment) or site design modifications to a solar energy system made after issuance of the required building permit shall require approval by the Applicable Board.

e. Recording: Maintenance Agreements, a Final As-Built including any modifications approved by the Applicable Board shall be recorded in Land Evidence Records for all ground array systems.

f. Abandonment: With the exception of roof-mounted structures, absent notice of a proposed date of decommissioning or written notice of extenuating circumstances, the

solar energy system shall be considered abandoned if it fails to operate for more than one (1) year without the written consent of the Zoning Board of Review or Planning Board as it relates to the land development project approval.

g. Surety: Prior to final approval and recording of a medium or large ground array, the owner/operator shall provide an appropriate surety approved by the Zoning Board of Review or Planning Board equal to 110% of the current cost of removal and re-vegetation of the site, as recommended by the applicable board. Surety shall be held by the Town until such time the applicable board votes to release the funds finding compliance with all obligations and no need to secure future compliance. Surety will not be required for a Municipal or State-owned facility.

h. Municipal Exemption: Nothing herein shall preclude the Town of Portsmouth from installing SES on any town-owned or controlled property regardless of the zoning district.

Section H. Small SES Application Requirements

The application requirements for all Small SES proposals shall follow the application requirements of Article VII Section B. Procedures.

Section I. Violations

It shall be unlawful for any person or entity to construct, install, operate, or substantially modify a SES that is not in compliance with the provisions of this ordinance or with any condition contained in a permit issued pursuant to this ordinance. All violations shall be enforced under Article XVI of this ordinance.