ARTICLE_____. – SOLAR PHOTOVOLTAIC SYSTEM DEVELOPMENTS

Section 1. - Introduction.

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.

A solar energy system may require plan review, and construction and installation approvals from the Tiverton Planning Board, Building Official and Fire Department as outlined in this Ordinance. A contractor installing a solar energy system must hold a Rhode Island Renewable Energy Professional Certificate or Electrical License. All applications must be consistent with all applicable State and Federal fire and electrical safety codes and shall obtain all Town building and electrical permits as required.

Section 2. – Definitions.

There are four (4) categories of Solar Photovoltaic Systems contemplated by this zoning ordinance:

a. *Accessory 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.

b. *Small System*: a 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. Small solar energy systems are not subject to Development Plan Review (Article XX), but shall meet all the applicable zoning district requirements.

c. *Medium System:* a solar energy system that is the primary use of a lot or lots. 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. A medium system shall be subject to Development Plan review under Article XX and the unique requirements contained in this Zoning Ordinance.

d. *Large System:* a solar energy system that is the primary use of a lot or lots. A large system shall consist of more than 40,000 square feet of solar panel surface area. Large solar energy systems shall be subject to review as a Major Land Development under Tiverton's Land Development and Subdivision Regulations and the unique requirements contained in this Zoning Ordinance.

Section 3. - District Use Regulations

P = Permitted N= Not Permitted/Prohibited

Zoning Districts	R-30	R-40	R-60	R-80	VC	GC*	HC	W	I	OS
Accessory Roof-Mounted Solar Energy System	P	P	P	P	N	P	P	P	P	P
Small Solar Energy System	P	P	P	P	N	P	P	N	P	N
Medium Solar Energy System	P**	P**	P	P	N	P	P	N	P	N
Large Solar Energy System	P**	P**	P	P	N	P	P	N	P	N

* GC includes: General Commercial
TMS-Traditional Main Street
NB- Neighborhood Business
PFD-Pedestrian Friendly Destination

**ADDITIONAL Requirements include:

(1) setbacks of sixty (60) feet, with thirty (30) feet of natural screening vegetated buffer, landscaped or fencing screening of six (6) feet height minimum
(2) minimum parcel size of no less than three (3) acres

Section 4. – Application Requirements.

For medium and large ground arrays the following supplements, and does not supplant individual application requirements:

a. All plans and maps shall be prepared, stamped and signed by a registered professional engineer licensed for each required discipline to practice in Rhode Island.
b. Name, address, signature and contact information shall be provided for the project applicant, co-applicant or any agent representing the applicant's proposed system installer shall submit an affidavit for the file.
c. The applicant shall provide a project summary, project schedule, electrical schematics and site plan.

d. A rendering or photo simulation shall be provided showing the proposed completed project.
e. Identify the location of wetlands and provide evidence of compliance with the environmental regulations.
f. The facility shall be designed to be compatible with continued agricultural use of the land whenever possible.
g. One or three line electrical diagrams detailing the solar photovoltaic installation, associated components and electrical interconnection methods with all State Electrical Code required disconnects and overcurrent devices shall be shown on the plans.
h. Documentation of the major system components to be used, including the electric generating photovoltaic panels, mounting system and inverter(s) or inverter enclosure shall be provided, including applicable Material Safety Data Sheets (MSDS).
i. A list of any hazardous materials proposed to be located on the site in excess of household quantities, including applicable Material Safety Data Sheets (MSDS) or hazardous materials utilized within the solar photovoltaic equipment, and a plan to prevent or contain their release to the environment.
j. The applicant shall develop an emergency response plan including final written approval from the Fire Department of all means of shutting down the solar installation. The applicant shall provide the name of an authorized contact person throughout the life of the installation. The name of the designated individual shall be kept current and on file with the Town's Building Official and the Tiverton Fire Department.
k. A change in contact information shall be updated within one month for changes in ownership or authorized field personnel of operations.
l. The applicant shall submit a plan for the operation and maintenance of the installation for approval by the Tiverton Planning Board or Building Official/designee and recorded in the Land Evidence Records. This shall include measures for:
    (1) Site access- which requires written approval from the Director of the Department of Public Works, the owner/operator shall be responsible for any access road(s), unless accepted as a public way by the Tiverton Town Council
    (2) Fire & Public safety- which requires written approval from the Tiverton Fire Department, Tiverton Police Department, Emergency Management Director and emergency medical services
    (3) Stormwater control- which requires written approval from Department of Public Works
    (4) Integrity of security measures- which requires written approval from the Chief of the Tiverton Police Department
    (5) Removal and revegetation of the property if the installation is removed to mitigate stormwater runoff
    (6) The owner and/or operator shall be responsible for the cost of maintaining the installation in good physical condition- including painting, equipment and perimeter fencing maintenance and structural repairs

Section 5. - Dimensional Requirements.

a. Height: The maximum height of a medium and large system shall be twelve (12) feet, with the exception of solar covered parking structures which shall have a maximum height of eighteen (18) feet from the ground. The height shall be measured from the ground level or the base of the system's pedestal to the highest point of the solar energy system, including the top of any support structure or panel.
b. Setbacks: Small systems accessory to a primary structure shall adhere to the setback requirements found in Tiverton Zoning Ordinance, Article VI, Section 1. Yard Regulations and Accessory Structures. Medium and large installations shall maintain a fifty (50) foot setback or sixty (60) foot setback as required in Section 3.
c. Lot coverage: Impervious lot coverage for a small system shall follow the individual zoning district regulations. 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 6. - Roof-Mounted Systems

a. Photovoltaic roofing shingles or tiles are preferred and may be directly applied to the roof surface.
b. A shingle or tile installation requires a standard red rectangle sign stating "photovoltaic power source" and shall be mounted in the immediate area of the electric meter. A PV power source disconnect accessible from the ground shall be installed in the same area.
c. Solar energy systems shall be considered part of the overall design of the structure: shape and proportions of the solar devices should not conflict with the shape and proportions of the roof.
d. Pitched roof systems must end within three feet of any edge of a roof surface, and shall terminate at least eighteen (18) inches from roof lines (at pitch).
e. Flat roof systems may be set at an optimal angle and elevated.
f. Roof-mounted structures are exempt from any screening devices.

Section 7. - Design and Operation Standards: Ground Array Solar Energy Systems

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. 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 Planning Board equal to 110% of the current cost of removal and re-vegetation of the site, as recommended by the Planning Board's Consultant Engineer. A small ground array shall be exempt from posting a surety but shall record an Agreement for the decommissioning and removal in Land Evidence Records. Surety shall be held by the Planning Board until such time the Planning Board votes to release the funds. Surety will not be required for a Municipal or State-owned facility.

c. Utility notification: No grid-intertie photovoltaic system shall be installed until evidence has been provided to the Planning Board that the owner has submitted notification to the utility company of the customer's intent to install an interconnected customer-owned generation system. Off-grid systems are exempt from this requirement.
d. Lighting: Lighting of solar energy systems shall be consistent with local, State and Federal laws. 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. LED lighting shall be directed downward and shall incorporate full cut-off fixtures to reduce light pollution.
e. Screening: Consists of natural plantings or landscaping designed to screen the installation but not impede its solar energy capture efficiency. A newly landscaped vegetative buffer shall consist of plants from the Rhode Island native plant database and the landscape plan shall be prepared by a registered landscape architect. A vegetative buffer shall be a minimum of six (6) feet in height.

    (1) Small systems shall require fence screening or vegetation surrounding the perimeter of the installation (see Setbacks 5.b.).
    (2) Medium and large solar energy systems shall maintain any existing vegetative buffer of twenty (20) feet within the required setback. If new plantings are required to screen the installation, the applicant shall plant new plantings of sufficient depth to screen the installation from the roadway and shall be approved by the Planning Board.

f. Security: Medium and large solar energy systems shall surround the perimeter of the installation with no less than seven (7) and no more than ten (10) feet in height of fencing.
g. Signage: Signs shall comply with Tiverton's 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 identification of the manufacturer or operator of the solar energy system.
h. Utility connections: Excluding roof-mounted and small solar energy systems, the Planning Board shall review if approved utility connections from the solar photovoltaic installation shall be installed underground; taking into consideration soil conditions, location, and topography of the site and any requirements of the utility provider.
i. Land clearing, soil erosion and habitat impacts: 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 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.
j. 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 Planning Board.
k. Recording: Maintenance Agreements, a Final As-Built including any modifications approved by the Planning Board shall be recorded in Land Evidence Records for all ground array systems.

l. 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 Town Council and Planning Board as it relates to the land development project approval.

A small system that is no longer operational must be removed prior to a sale of the property.

If the owner or operator of medium or large solar energy systems fails to remove the facility in accordance with the requirements of this section within 150 days of either abandonment or the proposed date of decommissioning, following notification and a public hearing the Planning Board may vote to call the surety and the Town may physically remove the facility.

This ordinance shall become effective upon passage.