

Thorndike Solar Farm Ordinance
(Enacted 3/19/16)

1. Purpose

The purpose of this ordinance is to establish a municipal review procedure and siting standards for Principal Solar Energy Systems (PSES), typically characterized as “solar farms”, those producing power primarily for off-site use. These standards are intended to:

- a. Establish clear guidelines, standards and time frames for the Town to regulate solar farms;
- b. Permit the Town to fairly and responsibly protect public health, safety and welfare;
- c. Minimize any potential adverse effect of solar farms on property values;
- d. Provide for the removal of panels and associated utility structures that are no longer being used for energy generation and transmission purposes; and
- e. Support the goals and policies of the Comprehensive Plan, including orderly development, efficient use of infrastructure, and protection of natural and scenic resources.

2. Authority

This ordinance is enacted pursuant to the enabling provisions of Article VIII, Part 2, §1 of the Maine Constitution, the provisions of Title 30-A MRSA, §3001 (*Home Rule*), and the provisions of Title 30-A §4311 et seq. (*Comprehensive Planning and Land Use Regulation, or “Growth Management” Act*). This ordinance is founded upon and pursuant to the *Town of Thorndike Comprehensive Plan*, adopted on December 6, 1991.

3. Applicability

No Principal Solar Energy System (PSES) shall be located within the Town of Thorndike without a Permit issued by the Planning Board. Any physical modification to any existing PSES that expands the PSES shall require approval under this Ordinance. Routine maintenance or replacements do not require a permit.

4. Definitions

As used in this Ordinance, unless the context otherwise indicates, the terms referenced below have the following meanings:

Accessory Solar Energy Systems (ASES). An area of land or other area used for a solar collection system principally used to capture solar energy, convert it to electrical energy or thermal power and supply electrical or thermal power: (a) primarily; or (b) solely for on-site use. An accessory solar energy system consists of one (1) or more free-standing ground, or roof mounted, solar arrays or modules, or solar related equipment and is intended to primarily reduce on-site consumption of utility power or fuels. An ASES generally occupies 1,750 square feet of surface area or less (equivalent to a rated nameplate capacity of about 10 kW DC or less).

Principal Solar Energy Systems (PSES). An area of land or other area used for a solar collection system principally used to capture solar energy, convert it to electrical energy or thermal power and supply electrical or thermal power primarily for off-site use. Principal solar energy systems consist of one (1) or more free-standing ground, or roof mounted, solar collector devices, solar related equipment and other accessory structures and buildings including light reflectors, concentrators, and heat exchangers; substations; electrical infrastructure; transmission lines and other appurtenant structures. Medium scale PSES's occupies more than 1,750 but less than 40,000 square feet of surface area (equivalent to a rated nameplate capacity of about 10 - 250 kW DC). Large Scale PSES's occupies more than 40,000 square feet of surface area (equivalent to a rated nameplate capacity of about 250kW DC or greater).

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

Solar Energy. Radiant energy (direct, diffuse and/or reflective) received from the sun.

Solar Energy System. A solar photovoltaic cell, module, or array, or solar hot air or water collector device, which relies upon solar radiation as an energy source for collection, inversion, storage, and distribution of solar energy for electricity generation or transfer of stored heat.

Solar Array. A grouping of multiple solar modules with the purpose of harvesting solar energy.

Solar Cell. The smallest basic solar electric device which generates electricity when exposed to light.

Solar Farm. See Principal Solar Energy System.

Solar Module. A grouping of solar cells with the purpose of harvesting solar energy.

Solar Related Equipment. Items including a solar photovoltaic cell, module, or array, or solar hot air or water collector device panels, lines, pumps, batteries, mounting brackets, framing and possibly foundations or other structures used or intended to be used for collection of solar energy.

5. Administration and Enforcement

This Ordinance will be administered through the provisions of the Thorndike Site Plan Review Ordinance, specifically Articles V (Administration), VI (Application Procedure) and VIII (Enforcement), which are hereby incorporated by reference. Specific application requirements and standards of review pertinent to Principal Solar Energy Systems within this Ordinance shall be added to the Application Requirements and Standards of Approval within the Site Plan Review Ordinance. In case of a conflict, the stricter provision shall apply.

6. Specific Application Requirements

In addition to the requirements listed in Section 6.4 D) of the Site Plan Review Ordinance, an application for a Principal Solar Energy System Permit must also include the following, at the cost of the applicant:

- a. A description of the owner of the system, the operator if different, and detail of qualifications and track record to run the facility;
- b. If the operator will be leasing the land, a copy of the agreement (minus financial compensation) clearly outlining the relationship inclusive of the rights and responsibilities of the operator, landowner and any other responsible party with regard to the PSES and the life of the agreement;
- c. A description of the energy to be produced and to whom it will be sold;
- d. A copy of the agreement and schematic details of the connection arrangement with the transmission system (most likely Central Maine Power Company), clearly indicating which party is responsible for various requirements and how they will be operated and maintained;
- e. A description of the panels to be installed, including make and model, and associated major system components;
- f. A construction plan and timeline, identifying known contractors, site control and anticipated on-line date;
- g. An operations and maintenance plan, including site control and the projected operating life of the system;
- h. An emergency management plan for all anticipated hazards;
- i. Proof of financial capacity to construct and operate the proposed facility;
- j. A decommissioning plan, including:
 - 1) A description of the trigger for implementing the decommissioning plan. There is a rebuttable presumption that decommissioning is required if no electricity is generated for a continuous period of twelve (12) months. The Applicant may rebut the presumption by providing evidence, such as a force majeure event that interrupts the generation of electricity, that although the project has not generated electricity for a continuous period of 12 months, the project has not been abandoned and should not be decommissioned.
 - 2) A description of the work required to physically remove all Solar Panels, associated foundations, buildings, cabling, electrical components, and any other Associated Facilities to the extent they are not otherwise in or proposed to be placed into productive use. All earth disturbed during decommissioning must be graded and re-seeded, unless the landowner of the affected land requests otherwise in writing.
 - a. [Note: At the time of decommissioning, the Applicant may provide evidence of plans for continued beneficial use of any or all of the components of the Solar Energy Facility. Any changes to the approved decommissioning plan shall be subject to review and approval by the Planning Board.]

- 3) An estimate of the total cost of decommissioning less salvage value of the equipment and itemization of the estimated major expenses, including the projected costs of measures taken to minimize or prevent adverse effects on the environment during implementation of the decommissioning plan. The itemization of major costs may include, but is not limited to, the cost of the following activities: panel removal, panel foundation removal and permanent stabilization, building removal and permanent stabilization, transmission corridor removal and permanent stabilization and road infrastructure removal and permanent stabilization.
- 4) Demonstration in the form of a performance bond, surety bond, letter of credit, parental guarantee or other form of financial assurance as may be acceptable to the Planning Board that upon the end of the useful life of the Solar Energy Facility the Applicant will have the necessary financial assurance in place for 100% of the total cost of decommissioning, less salvage value. The Applicant may propose securing the necessary financial assurance in phases, as long as the total required financial assurance is in place a minimum of 5 years prior to the expected end of the useful life of the Solar Energy Facility. The financial assurance shall include a provision granting the Town the ability to access the funds and property and perform the decommissioning if the facility is abandoned or the Applicant or subsequent responsible party fails to meet their obligations after reasonable notice, to be defined in the agreement and approved by the Planning Board.

7. Standards for Approval

In addition to the requirements in Article VII of the Site Plan Review Ordinance, the following standards must also be met:

Ground-Mounted Systems:

1. Lot Size - The PSES shall meet the minimum lot size requirements of the applicable zoning district.
2. Legal Responsibilities - The Applicant must provide proof that it has authorization to construct, use and maintain the property and any access drive for the life of the project and including the decommissioning of the project. The roles and responsibilities of the system owner, operator, landowner and any other party involved in the project must be clear and meet the satisfaction of the Planning Board that the public interest is protected.
3. Setback - Structures within a PSES shall be setback a minimum of 50 feet from the side and rear property lines and meet the front setback requirements for structures within the zoning district.
4. Prohibited Locations – Components of a ground mounted PSES shall not be placed within any legal easement or right-of-way location, or be placed within any stormwater conveyance system, or in any other manner that would alter or impede stormwater runoff from collecting in a constructed stormwater conveyance system.
5. Utility Notification - No grid-intertied photovoltaic system shall be installed until evidence has been given to the Planning Board that the applicant has an agreement with the utility to accept the power. Off-grid systems are exempt from this requirement.
6. Signage - A sign shall be required to identify the owner and provide a 24-hour emergency contact phone number. Solar energy systems shall not be used for displaying any advertising except for reasonable identification of the manufacturer or operator of the solar energy system. A clearly visible warning sign shall be placed at the base of all pad-mounted transformers and substations and on the fence surrounding the PSES informing individuals of potential voltage hazards.
7. Utility Connections - Reasonable efforts, as determined by the Planning Board, shall be made to place all utility connections from the solar photovoltaic installation underground, depending on appropriate soil conditions, shape, and topography of the site and any requirements of the utility provider. Electrical transformers for utility interconnections may be above ground if required by the utility provider.

8. Emergency Services – PSES owner or operator shall provide a copy of the project summary, electrical schematic, and site plan to the Fire Chief. Upon request, the owner or operator shall coordinate with local emergency services in developing an emergency response plan. A “3200 Series KNOX-BOX” shall be provided and installed by the operator to be used to allow emergency service personnel continuous access. All means of shutting down the solar energy system shall be clearly marked. The owner or operator shall identify a responsible person for public inquiries throughout the life of the installation.
9. Maintenance Conditions - The PSES owner or operator shall maintain the facility in good condition. Maintenance shall include, but not be limited to, painting, structural repairs, and integrity of security measures. The PSES must be properly maintained and be kept free from all hazards, including, but not limited to, faulty wiring, loose fastenings, being in an unsafe condition or detrimental to public health, safety or general welfare. Site access shall be maintained to a level acceptable to the fire chief for emergency response. The owner or operator shall be responsible for the cost of maintaining the solar energy system and any access road(s).
10. Modifications - Any material modifications to a large-scale ground-mounted solar energy system made after issuance of the required town permit(s) shall require approval by the CEO and/or Planning Board.
11. Satisfaction with All Aspects of Capacity and Plans Submitted -- The Planning Board must find that the Applicant has the capacity to finance, safely operate and decommission the Solar Energy Facility.
12. Removal - When any portion of a ground mounted PSES is removed, any earth disturbance must be graded and re-seeded.

Roof Mounted Solar Energy Systems:

1. The owner shall provide evidence certified by an appropriately licensed professional that the roof is capable of supporting the collateral load of the PSES.
2. PSES mounted on roofs of any building shall be subject to the maximum height regulations specified for principal and accessory buildings within the applicable zoning district.