

## **Proposed Change – Add**

### **ARTICLE VI-D SOLAR ENERGY SYSTEMS**

#### **I. AUTHORITY AND PURPOSE**

This Ordinance for Solar Energy Systems for Residential and Non-Residential Uses is enacted in accordance with RSA 674:17, I (j), 674:62-66, and the purposes outlined in RSA 672:1, III-a. The purpose of this ordinance is to accommodate Solar Energy Systems in appropriate locations, while protecting the public's health, safety and welfare.

#### **II. GOALS**

- A. The Town of Lincoln intends to facilitate state and national goals of developing clean, safe, renewable energy resources in accordance with the enumerated policies of RSA 374-G, RSA 362-F and RSA 477:49-51.
- B. The Town of Lincoln intends to allow for the use of Solar Energy Systems in the community while maintaining Lincoln's scenic vistas and rural character, particularly as seen from public roads.
- C. The Town of Lincoln intends to minimize potential adverse impacts of Solar Energy Systems in the community by ensuring that such facilities are properly screened and are properly sited within existing topographic features of the property, avoiding solar glare for neighbors and drivers on the roads.
- D. The Town of Lincoln intends to ensure that consistent maintenance and safety procedures are in place to protect the public health.
- E. This ordinance aims to promote the accommodation of distributed, on-site residential and non-residential Solar Energy Systems and associated equipment installed to reduce on-site energy consumption.
- F. This ordinance permits, as an accessory use, residential Solar Energy Systems, while protecting the safety, welfare and fair market value of adjacent and surrounding land uses through appropriate zoning and land use controls.
- G. A Solar Energy System shall provide power for the principal use and/or accessory use of the property on which the Solar Energy System is located.
- H. A residential Solar Energy System shall be permitted in any zoning district as an accessory use, subject to specific criteria as set forth below. Where general standards and specific criteria overlap, specific criteria shall supersede general standards.
- I. A non-residential Solar Energy System shall be permitted in any zoning district as an accessory use, subject to Site Plan Review Approval by the Planning Board. Where general standards and specific criteria overlap, specific criteria shall supersede general standards.
- J. This ordinance does not address utility-scale Solar Energy Systems, intended for the sale of electricity to utilities, industries, and/or businesses.

### III. DEFINITIONS

**Accessory Use:** A use customarily incidental and subordinate to the primary use or building and located on the same lot therewith. A use which dominates the primary use or building in area, extent, or purpose shall not be considered an accessory use.

**Distributed Solar Energy System:** Solar Energy Systems located on-site and designed to provide solar thermal energy or solar photovoltaic (“PV”) electricity to a property owner, occupant, and/or facilities.

**Mounting:** The manner in which a solar PV system is affixed to the roof or ground (i.e. roof mount, ground mount, or pole mount).

**Solar Collector:** A solar PV cell, panel, or array, or solar thermal collector device, that relies upon solar radiation as an energy source for the generation of electricity or transfer of stored heat.

**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:** An arrangement of Solar Collectors and other electrical and/or mechanical devices capable of collecting and converting solar radiation into heat or mechanical or electrical energy and transferring these forms of energy by a separate apparatus to storage or to point of use, including, but not limited to, water heating, space heating or cooling, electric energy generation, or mechanical energy generation.

**Solar Energy System, Ground Mounted:** A Solar Energy System that is structurally mounted to the ground and is not roof mounted. These systems are typically installed directly onto specialized solar racking systems, which are attached to an anchor in the ground and wired to connect to an adjacent home or building. Ground mount systems may be advisable when insufficient space, structural and shading issues, or other restrictions prohibit rooftop solar.

**Solar Energy System, Pole Mounted:** A Solar Energy System that is directly installed on specialized solar racking systems, which are attached to a pole, which is anchored and firmly affixed to a concrete foundation in the ground, and wired underground to an attachment point at the building’s meter. Unlike ground mount systems, pole mount systems are elevated from the ground. Pole mounted systems can be designed to track the sun (with single-axis or dual-axis tracking motors) and maximize solar output throughout the year.

**Solar Energy System, Roof Mounted (aka Rooftop Mounted, Building Mounted):** A Solar Energy System that is structurally mounted to the roof of a building or structure. These systems typically consist of solar panels installed directly on the roof of a home, commercial building, and/or an accessory structure, such as a garage, pergola, and/or shed. Solar panels are mounted and secured using racking systems specifically designed to minimize the impact on the roof and prevent any leaks or structural damage. Roof mount systems can be mounted flush with the roof or tilted toward the sun at an angle.

**Solar Glare:** The potential for solar panels to reflect sunlight, with an intensity sufficient to cause annoyance, discomfort, or loss in visual performance and visibility.

**Solar Skyspace Easement:** An easement recorded pursuant to RSA 477:49-51, “Solar Skyspace Easements,” the purpose of which is to secure the right to receive sunlight across the real property of another for the continued access to sunlight necessary to operate a Solar Energy System.

### **C. APPLICABILITY**

1. For purposes of this Ordinance, “Solar Energy System” and “Distributed Solar Energy System” have the same meaning. This ordinance applies to all Solar Energy Systems installed after the effective date of this ordinance.
2. Solar Energy Systems installed prior to the effective date of this ordinance shall not be required to meet the requirements of this ordinance.
3. All Solar Energy Systems shall be designed, erected, and installed in accordance with applicable local, state, utility, and national laws, ordinances, codes, regulations, and standards.
4. The Pole Mounted and Ground Mounted Solar Energy Systems are considered to be “structures” and shall be required to adhere to all applicable zoning requirements of the zoning district in which it is located.

### **D. SOLAR ENERGY SYSTEMS, PERMITS REQUIRED**

#### **1. Roof Mounted Solar Energy System on a Residential Building Capable of Producing Less Than or Equal to Twenty-Five Kilowatt (25 kW) of Electricity**

- a. Roof Mounted Solar Energy Systems mounted on a single-family residence with a generating capacity of less than or equal to twenty-five kilowatts (25 kW) of electricity shall require a Land Use Authorization Permit.
- b. Roof Mounted Solar Energy Systems mounted on a residential duplex with a generating capacity of less than or equal to twenty-five kilowatts (25 kW) of electricity per unit shall require a Land Use Authorization Permit.

#### **2. Pole Mounted or Ground Mounted Solar Energy System on a residential lot for a Residential Building Capable of Producing Less Than or Equal to Twenty-Five Kilowatts (25 kW) of Electricity**

Pole Mounted or Ground Mounted Solar Energy System, with a generating capacity of less than or equal to twenty-five kilowatts (25 kW) of electricity per dwelling unit for a property with one (1) single family residence or one (1) duplex, shall require a Land Use Authorization Permit.

#### **3. Roof Mounted, Pole Mounted or Ground Mounted Solar Energy System for a Residential Building Capable of Producing Greater Than Twenty-Five Kilowatt (25 kW) and Less Than One Megawatt (1 MW) of Electricity**

All proposed Solar Energy Systems that generate more than twenty-five kilowatts (25 kW) of electricity and less than one megawatt (1 MW) of electricity shall be required to obtain both Site Plan Review approval from the Planning Board as well as a Land Use Authorization Permit, following Planning Board approval.

4. **Roof Mounted, Pole Mounted or Ground Mounted Solar Energy Systems for a Residential Building Capable of Producing Equal to or Greater Than One Megawatt (1 MW) of Electricity**

- a. All proposed Solar Energy Systems that produce equal to or greater than one megawatt (1 MW) of electricity are prohibited. Solar Energy Systems of this size fall under the jurisdiction of the State of New Hampshire. If the State of New Hampshire authorizes a Solar Energy System equal to or greater than one megawatt (1 MW) for a residential building, both Site Plan Review approval and a Land Use Authorization Permit will be required.

5. **Roof Mounted, Pole Mounted or Ground Mounted Solar Energy Systems for Vacant Land, Land with Non-Residential, Commercial or Industrial Buildings or Multi-Family Housing that Produce Less Than One Megawatt (1 MW) of Electricity**

All proposed Solar Energy Systems for Non-Residential Buildings, Public Buildings, Commercial Buildings, Industrial Buildings or Multi-Family Housing (a building with greater than two housing units) that produce greater than twenty-five-Kilowatt hours (25kW) of electricity and less than one megawatt hour (1 MW) of electricity shall be required to obtain both Site Plan Review Approval from the Planning Board and a Land Use Authorization Permit, following Planning Board approval.

6. **Roof Mounted, Pole Mounted or Ground Mounted Solar Energy Systems for Vacant Land, Land with Non-Residential, Commercial or Industrial Buildings or Multi-Family Housing that Produce Equal to or Greater Than One Megawatt (1 MW) of Electricity**

Solar Energy Systems whether Ground Mounted, Pole Mounted, or Roof Mounted that have a generating capacity of equal to or greater than one megawatt (1 MW) of electricity are prohibited. If the State of New Hampshire authorizes a Solar Energy System greater than one megawatt (1 MW), both Site Plan Review approval and a Land Use Authorization Permit will be required.

7. **Application and Review Procedure:** An Application for Site Plan Review, if required, and an Application for a Land Use Authorization Permit shall both require the submittal of a stamped site plan prepared by a licensed NH surveyor and detailed plans for the Solar Energy System.

**E. MINIMUM DIMENSIONAL REGULATIONS**

If the Planning Board grants Site Plan Review approval pursuant to this section, the Solar Energy System shall be constructed in a manner compliant with any conditions imposed by the Planning Board as well as the following minimum standards:

1. **Solar Energy System, Ground Mount or Pole Mount:** The installation and construction of a Ground Mount or Pole Mount Solar Energy System shall be subject to the following development and design standards:
  - a. **Height:** The height of the solar collector and any Ground Mount or Pole Mount shall not exceed an overall maximum height of twelve feet (12') when oriented at maximum tilt, from the ground level to the top of the top edge of the tallest panel.

- b. **Structure:** A Pole Mount or Ground Mount Solar Energy System is considered to be a “structure” in accordance with the LUPO and must comply with the setback and other applicable provisions of the LUPO.
  - c. **Lot Coverage/Footprint:** Lot coverage associated with the various zoning districts shall apply. The surface area of a Ground Mounted or a Pole Mounted Solar Energy System, regardless of the mounted angle, shall be calculated as part of the overall lot coverage. The footprint of the Solar Energy System shall include all above ground components and shall be calculated by including the entire area within a single, continuous perimeter enclosing all elements of the Solar Energy System.
  - d. **Setbacks for a Solar Energy System, Ground Mount or Pole Mount:** All except Roof Mount Solar Energy Systems shall adhere to applicable front, side and rear setbacks for structures in the underlying zoning district. These systems shall not be considered accessory structures when determining required setback provisions.
  - e. **Transmission Lines Underground:** All power transmission lines from a Ground Mounted Solar Energy System to any building or other structure shall be located underground and/or in accordance with the State Building Code or Electrical Code, as appropriate.
2. **Solar Energy System, Roof Mount:** The installation and construction of a Roof Mount Solar Energy System shall be subject to the following development and design standards:
- a. Roof Mounted Solar Energy Systems may be mounted on a principal or accessory building.
  - b. Roof Mounted Solar Energy Systems shall be considered part of the building for the purposes of the height requirements as allowed for in Article IV, District and District Regulations, Section B, District Regulations, Paragraph 7, Height Requirements. Any height limitations of the Land Use Plan Ordinance shall be applicable to solar collectors.
  - c. If the Solar Energy System is to be Roof Mounted on an accessory structure and the accessory structure setbacks are less stringent than the primary structure setbacks, the Town will apply the less stringent setback requirement.

## **F. MINIMUM CONSTRUCTION STANDARDS**

- 1. **State Codes Apply:** All Solar Energy Systems shall conform to applicable state and federal laws and regulations and local ordinances, including the State Building Code, the State Electrical Code and the State Fire Code.
- 2. A Solar Energy System shall provide power for the principal use and/or accessory use of the property on which the Solar Energy System is located.
- 3. All electrical equipment associated with and necessary for the operation of Solar Energy Systems shall comply with the following:
  - a. Electrical equipment shall comply with the setbacks specified for structures in the underlying zoning district.

- b. Placement of solar panels should be situated to minimize or negate any solar glare onto nearby properties or roadways, without unduly impacting the functionality or efficiency of the Solar Energy System.
4. A Solar Energy System shall not be used to display permanent or temporary advertising, including signage, streamers, pennants, spinners, reflectors, banners or similar materials. The manufacturer's information, equipment information, warnings, or other indications of ownership shall be allowed on the Solar Energy System equipment.

#### **G. SAFETY AND INSPECTIONS**

1. If a Land Use Authorization Permit is required for a Solar Energy System, upon completion of the installation, the installer shall submit a Construction Control Affidavit to the Town's Planning and Zoning Administrator which certifies that the Solar Energy System was installed in compliance with all applicable codes and regulations.
2. Any connection to the public utility grid must be approved by the appropriate public utility.
3. If solar storage batteries are included as part of the solar collector system, they must be installed according to all requirements set forth in the National Electric Code, State Building Code and State Fire Code. When no longer in operation, the batteries shall be disposed of in accordance with the laws and regulations of State of New Hampshire, the Town of Lincoln and any other applicable laws and regulations relating to hazardous waste disposal.
4. Unless otherwise specified through a contract or agreement, the property owner of record will be presumed to be the responsible party for owning and maintaining the Solar Energy System.

#### **H. ABANDONMENT AND REMOVAL**

A ground or pole-mounted Solar Energy System is considered to be abandoned if it has not been in operation for a period of twelve (12) months, in which case the Solar Energy System shall be removed by the owner within one hundred and fifty (150) days from the expiration of that 12-month period. If the owner fails to remove the abandoned Solar Energy System within 150 days, the Town may pursue a legal action to have the system removed at the owner's expense.

#### **I. WAIVERS**

Upon application duly made, the Planning Board may grant waivers from the strict application of the requirements of this article where the Board finds, on the probability of evidence presented to it, with the burden upon the applicant for the facility, that: (i) Strict adherence to the requirements of this article is not required to effectuate the purposes hereof; (ii) Strict compliance would create practical difficulty and unnecessary inconvenience; (iii) Strict compliance could potentially cause a conflict with another provision of the LUPO.