

Section 7: Solar Energy Regulations

Solar Energy Facilities

7.1 PURPOSE

1. This Article aims to promote the accommodation of solar energy systems and equipment and the provision for adequate sunlight and convenience of access necessary therefore, and to balance the potential impact on neighbors when solar collectors may be installed near their property while preserving the rights of property owners to install solar energy systems without excess regulation. In particular, this regulation is intended to apply to free standing; ground mounted or pole mounted solar energy system installations based upon certain placement. This regulation is not intended to override agricultural exemptions that are currently in place.

7.2 Definitions

ALTERNATIVE ENERGY SYSTEMS: Structures, equipment, devices or construction techniques used for the production of heat, light, cooling, electricity or other forms of energy on site and may be attached to or separate from the principal structure.

BUILDING-INTERGRATED PHOTOVOLTAIC (BIPV): The incorporation of photovoltaic (PV) material into a building's envelope. Technologies include PV shingles or tiles, PV laminates, and PV glass. Examples of placement include vertical facades, semi-transparent skylights, awnings, fixed awnings, and roofs.

COLLECTIVE SOLAR: Installations of Solar Energy Systems that are owned collectively or leased through a homeowner's association, community or municipal system, "adopt-a-solar-panel" programs, or other similar arrangements.

GLARE: A continuous source of excessive brightness, relative to diffused lighting. This is not a direct reflection of the sun, but rather a reflection of the bright sky around the sun. Glare is significantly less intense than glint.

GLINT: A momentary flash of light that may be produced as a direct reflection of the sun on a solar collection system.

GROUND-MOUNTED SYSTEM: A solar energy system that is anchored to the ground and attached to a pole or similar mounting system, detached from any other structure.

MAJOR SOLAR COLLECTION SYSTEM or SOLAR FARM: An area of land or other area used for a solar collection system principally used to capture solar energy and convert it to electrical energy to transfer to the public electric grid in order to sell electricity to or receive a credit from a public utility entity, but also may be for on-site use. Solar farm facilities consist of one or more freestanding GROUND-MOUNTED or ROOF-MOUNTED solar collector devices, Solar energy systems producing 25MW or more are permitted by the New York State Board on Electric Generation Siting and the Environment (siting board) under Article 10 of the New York State Public Service Law. The Siting Board is responsible for issuing Certificates of Environmental Compatibility and Public need, authorizing the construction and operation of major electric generating facilities.

MINOR OR ACCESSORY SOLAR COLLECTION SYSTEM: A solar photovoltaic cell, panel, array, 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, secondary to the use of the premises for other lawful purposes, Minor solar collection systems may consist of BUILDING-INTERGRATED PHOTOVOLTAICS, GROUND-MOUNTED or ROOF-MOUNTED solar collector devices. A system that generates no more than 125% of the power consumption needed on site and/or a total surface area of all solar panels on the lot of up to 4,000 square feet. Farm operations in an Agricultural District may construct a minor or accessory solar collection system that does not exceed 110% of the farm's energy needs.

ROOF-MOUNTED SYSTEM: A solar panel system located on the roof of any legally permitted building or structure for the purpose of producing electricity for onsite or offsite consumption.

SOLAR ACCESS: Space that is open to the sun and clear of overhangs or shade. Structures constructed on private property will not infringe on the rights of adjacent properties.

SOLAR ENERGY EQUIPMENT and other accessory structures and buildings, including light reflectors, concentrators, and heat exchangers, substations, electrical infrastructure, transmission lines and other appurtenant structures and facilities.

SOLAR ENERGY EQUIPMENT/SYSTEMS: Energy storage devices, material, hardware, or electrical equipment and conduit associated with the production of electrical energy.

SOLAR PANEL: A device capable of collecting and converting solar energy into electrical energy.

COMMERCIAL SOLAR: A solar energy system which is intended to be used for any purpose, other than private, or residential, or agricultural use, including community based systems.

7.3: APPLICABILITY

1. The requirements of this section shall apply to all solar energy systems installed or modified after the effective date of this ordinance, excluding general maintenance and repair.
2. All Solar energy system installations require a building permit.
3. All solar energy systems shall be designed, erected, and installed in accordance with all applicable codes, regulations and industry standards as referenced in the New York State Uniform Fire Prevention and Building Codes and the Town Code.
4. Nothing contained in this provision shall be construed to prohibit “Collective Solar” installations or the sale of excess power through a “net billing” or “net metering” arrangement in accordance with New York State Public Service Law §sixty-six- j (§ 66-j) or similar New York State or federal law or regulation.
5. All solar energy systems shall be designed, erected, and installed so as to prevent undue glare from falling on adjoining properties or creating traffic safety issues.
6. It is the discretion of the Code Enforcement Officer to approve installation of minor solar systems. All Major solar installations must be approved by the Waddington Town Planning Board.

7.4 SOLAR COLLECTORS AND INSTALLATIONS FOR MINOR SYSTEMS

1. Roof-mounted systems are permitted as accessory uses in all zoning districts, subject to the following requirements:
 - a) The distance between the roof and highest edge of the system shall be in accordance with the New York State Uniform Fire Prevention and Building Code.
 - b) Rooftop and building-mounted solar collectors shall not obstruct solar access to adjacent properties.
2. Ground-mounted and freestanding solar collectors are permitted as accessory structures in all zoning districts, subject to the following requirements:
 - a) The location of the solar collectors is not permitted in front yards and must be twenty (20) feet from side and twenty (20) feet from rear dimensions.
 - b) The height of the solar collectors and any mounts shall not exceed twelve (12) feet height restriction and oriented at a maximum tilt.
 - c) The solar collectors may not be located closer to a front lot line than the principal building on a property. If the side or rear yard is visible from adjacent

properties and roads, a solid fence, berm or vegetative screening that conforms to local requirements **MUST** be installed along shared lot lines to minimize visual impact to neighboring properties.

- d) Ground-mounted and freestanding solar collectors shall not obstruct solar access to adjacent properties.
3. All solar collector installations must be performed in accordance with applicable electrical and building codes, the manufacturer's installation instructions, and industry standards, and prior to operation the electrical connections must be inspected by an appropriate electrical inspection person or agency and the Code Enforcement Officer as determined by the Town. In addition, any connection to the public utility grid must be inspected by the appropriate public utility.
4. When solar storage batteries are included as part of the solar collector system, they must be placed in a secure container or enclosure meeting the requirements of the New York State Uniform Fire Prevention and Building Code when in use and when no longer used shall be disposed of in accordance with the laws and regulations of St. Lawrence County and other applicable laws and regulations
5. Decommissioning. Small scale solar. Decommissioning Requirements for Small Scale Solar Energy Systems and Solar Energy Systems Designed for Subdivision Use Using Free-Standing or Ground Mounted Solar Collectors. If a Free-Standing or Ground Mounted solar collector(s) ceases to perform its originally intended function for more than twelve (12) consecutive months, the property owner shall remove the collector, mount and associated equipment by no later than ninety (90) days after the end of the twelve-month period. In the event that the property owner fails to remove the aforesaid non-functioning system within the time prescribed herein, the Town may enter upon the land where such system has been installed and remove same. All expenses incurred by the Town in connection with the removal of the non-functioning system shall be assessed against the land on which such free-standing or Ground Mounted solar collector(s) is located and shall be levied and collected in the same manner as provided in Article fifteen (15) of the N.Y. Town Law for the levy and collection of a special ad valorem levy.

7.5 MAJOR SOLAR SYSTEMS

1. **Major Solar Systems** are permitted **through** the issuance of a special use permit in all zoning districts except the waterfront overlay district and site plan review in accordance with this chapter. In addition, Major Solar Systems must meet the criteria set forth below.
2. A **Major Solar System** may be permitted when authorized by site plan review and

special use permit from the Town Planning Board subject to the following terms and conditions.

- a) Height and setback restrictions.
 - i. The maximum height for freestanding solar panels located on the ground or attached to a framework located on the ground shall not exceed twenty (20) feet in height above the ground.
 - ii. The minimum setback from property lines shall be twenty-five (25) feet, unless adjacent to residential neighbor.
 - iii. Fencing and/or a berm of vegetative screening shall be provided around all equipment and solar collectors to provide screening from adjacent residential properties and roads. Fencing shall not be barbed wire. When fencing will enclose the perimeter of the site or facility, wildlife friendly fencing that allows the passage of small mammals and reptiles and is designed to minimize wildlife injury and death due to entanglement or strangulation shall be used on sites having a solar facility footprint greater than five (5) acres. Exceptions can be made by the planning Board for sites that have limited surrounding wildlife habitat.
 - iv. For adjoining arrays, the number of features installed for the facility should be kept to a minimum, such as the use of shared access roads and fencing.
- b) Design standards.
 - i. Removal of trees and other existing vegetation should be minimized or offset with planting elsewhere on the property.
 - ii. Removal of any prime agricultural soil from the subject parcel is prohibited.
 - iii. Proposed major solar systems shall minimize the displacement of prime soils that are in active agricultural production. The site plan shall depict the location and extent of prime soils, prime soils if drained, soils of statewide importance, and indicate whether the parcel(s) is/are receiving an agricultural valuation. The site plan shall also depict the location and extent of current agricultural uses on the land (e. g rotational crops, hay land, unimproved pasture, support lands, and fallow lands) the location of diversions and ditches, and areas where tile drainage has been installed.
 - iv. Roadways within the site shall be built along field edges and along elevation contours where practical, constructed at grade and have a maximum width of sixteen (16) feet. Roadways shall not be constructed of impervious materials and shall be designed to minimize the extent of roadways constructed and soil compaction.
 - v. All on-site utility and transmission lines shall, to the extent feasible, be placed underground. Any above ground transmission lines that are used to accommodate the facility shall require utility

poles that are tall enough and installed at widths able to accommodate farm machinery and equipment. All utility poles shall provide 20' of clearance as measured from the shortest distance between the lowest electrical/utility lines and final grade. The installation of guy wires to utility poles is discouraged.

- vi. Solar collectors and other facilities shall be designed and located in order to minimize reflective glare and/or glint toward any inhabited buildings on adjacent properties and roads.
 - vii. All mechanical equipment, including any structure for batteries or storage cells, shall be enclosed by a minimum six (6)foot-high fence with a self- locking gate.
 - viii. Major systems or solar farms shall not obstruct solar access to adjacent properties.
 - ix. Any exterior lighting installed within the facility shall be downcast and dark sky compliant with recessed bulbs and full cut off shields.
- c) Signs.
- i. A sign not to exceed twelve (12) square feet shall be displayed on or near the main access point and shall list the facility name, owner and emergency phone number.
 - ii. A clearly visible warning sign concerning voltage must be placed at the base of all pad- mounted transformers and substations not to exceed four square feet.
- d) Safety.
- i. The owner/operator shall provide evidence that a copy of the site plan application has been submitted to the Fire Chief of the Waddington Fire Department. All means of shutting down the photovoltaic solar energy system shall be clearly marked on the site plan and building permit applications.

3. A piece of equipment meets the definition of oil-filled operational equipment at forty (40) CFR part112.2 (e.g. transformers, capacitors and electrical switches) shall comply with the secondary containment procedures of that regulation.

4. Decommissioning. Prior to removal of a Large Scale Solar Energy System, a demolition permit for removal activities shall be obtained from the Town of Waddington.

(a) Decommissioning Bond.

Prior to issuance of a building permit for a Large Scale Solar Energy System, the owner or operator of the Solar Energy System shall post a surety in an amount and form acceptable to the Town for the purposes of removal in the event the Large Scale Solar Energy System is abandoned. The amount of the surety required under this section shall be 125% of the projected cost of removal of the Solar Energy System and restoration of the property with an escalator of 2% annually for the life of the Solar Energy System. Acceptable forms shall include, in order of preference: cash; irrevocable letter of credit; or a bond that cannot expire; or a combination thereof. Such surety will be used to guarantee removal of the Large Scale Solar Energy System should the system be abandoned. In such case, the Town Building Inspector/Code Enforcement Officer shall then provide written notice to the owner or operator to remove the Large Scale Solar Energy System, and the owner or operator shall have one (1) year from written notice to remove the Solar Energy System including any associated accessory structures and/or equipment, and restore the site to a condition approved by the Planning Board. If the owner, operator applicant or lessee fails to remove any associated structures or restore the site to the condition approved by the Board, all costs of the Town incurred to enforce or comply with this condition shall be paid using the surety provided by the applicant.

(b) Decommissioning Plan. An application for a Large Scale Solar Energy System shall include a Decommissioning Plan. Removal of a Large Scale Solar Energy System must be completed in accordance with the Decommissioning Plan. The Decommissioning Plan shall:

- i. Specify that after the Large Scale Solar Energy System will no longer be used, it shall be removed by the owner and/or operator or any subsequent owner/operator and shall include a signed statement from the applicant acknowledging such responsibility. The application shall disclose the lease start date, length of the original lease, and number of options and timeframes if the lease is renewed. Within thirty (30) days of changing ownership, notice shall be provided to Town with the name of the new owner and contact information.
- ii. Demonstrate how the removal of all infrastructures (including but not limited to aboveground and below ground equipment, structures and foundations) and the remediation of soil and

vegetation shall be conducted to return the parcel to its original state prior to construction. For the decommissioning of solar systems on farmland, all equipment above grade and to a depth of four (4) feet below grade shall be removed from the site. The soils should also be de-compacted to a depth of two (2) feet, regraded and reseeded with native plants and seed mixes and exclude any invasive species.

- iii. Include photographs or archival color images of the proposed site plan area. For the Large Scale Solar Energy System. Such information must, in aggregate, adequately portray the entire property for the purpose of future reference when soil and vegetation remediation of the property occurs.
- iv. State that disposal of all solid and hazardous waste shall be in accordance with local, state and federal waste disposal regulations.
- v. Provide an expected timeline for decommissioning within the one-hundred day (180) period set forth below.
- vi. Provide a cost estimate detailing the projected cost of executing the Decommissioning Plan.

5. Abandonment and Removal.

- (a) A Large Scale Solar Energy System is considered abandoned after one (1) year of not performing all normal functions associated with electrical energy generation on a continuous basis.
- (b) Upon cessation of activity of a fully constructed Large Scale Solar Energy System for a period of one (1) year, the Town may notify the owner and/or operator of the facility to implement the Decommissioning Plan. Within one-hundred and eighty (180) days of notice being served, the owner and/or operator can either restore operation equal to 80% of approved capacity, or implement the Decommissioning Plan.
- (c) In the event that construction of the Large Scale Solar Energy System has been started but is not completed and functioning within eighteen (18) months of the issuance of the final Site Plan, the Town may notify the operator and/or the owner to complete construction and installation of the facility within one-hundred and eighty (180) days. If the owner and/or operator fail to perform, the Town may require the owner and/or operator to implement the Decommissioning Plan. The decommissioning plan must be

completed within one-hundred and eighty (180) days of notification by the Town to implement the Decommissioning Plan.

- (d) Applications for extensions of the time periods set forth in this subsection of no greater than one-hundred and eighty (180) days shall be reviewed by the Town Board.
- (e) Upon recommendation of the Building Inspector/Code Enforcement Officer, the Town Board may waive or defer the requirement that a Large Scale Solar Energy System be removed if it determines that retention of such facility is in the best interest of the Town.
- (f) If the owner and/or operator fails to fully implement the Decommissioning Plan within the prescribed time period and restore the site as required, the Town may use the financial surety posted by the owner and/or operator to decommission the site, or it may proceed with decommissioning at its own expense and recover all expenses incurred for such activities from the defaulted owner and/or operator. Any costs incurred by the Town shall be assessed against the property, shall become a lien and tax upon said property, shall be added to and become a part of the taxes to be levied and assessed thereon, and enforced and collected with interest by the same officer and in the same manner as other taxes.

7.6 SPECIAL USE PERMIT REQUIREMENTS

1. In addition to the other special use permit requirements of this Code, the following shall be provided to the Town
 - a) Verification of utility notification. Any foreseeable infrastructure upgrades shall be documented and submitted. Off-grid systems are exempt from this requirement.
 - b) Name, address, and contact information of the applicant, property owner(s), and agent submitting the project. In the event ownership of the facility changes hands, or if the lease is terminated, notification shall be sent to the Town within thirty days of the transfer or termination date. The notice shall include the name and contact information of the new owner(s). The new owner shall then be bound by the terms of the original agreement.
 - c) If the property of the proposed project is to be leased, legal consent between all parties, specifying the use(s) of the land for the duration of the project, including easements and other agreements, shall be submitted.

- d) Site Plan: Site plan approval is required.
- e) Blueprints signed by a New York State registered Professional Engineer or Registered Architect of the solar installation showing the layout of the system.
- f) Property Operation and Maintenance Plan: A property operation and maintenance plan is required, describing continuing photovoltaic maintenance and property upkeep, such as mowing, trimming, etc. Any such plan shall propose that the property maintain a neat and orderly appearance consistent with surrounding properties. The property shall at all times be maintained in a manner consistent with all properties within the Town of Waddington. If the array will be sited on farmland located in an Agricultural District, a completed Agricultural Data statement must be completed.
- g) The Town of Waddington has established that there shall be a Community Benefit to maximize the benefits of a solar project to the Town of Waddington and its residents. The benefit shall be determined, through an agreement negotiated between the Town and the developer/owner.