

**Municipal Officers' Certification of Official Text of a Proposed Ordinance [30-A M.R.S.A. § 3002(2)]**

To the Town Clerk of the Town of WALDO:

We hereby certify to you that the document to which we have affixed this certificate is a true copy of the official text of an ordinance entitled "Town of WALDO Solar Ordinance," which is to be presented to the voters for their consideration on Feb. 23<sup>rd</sup>, 2023.

Pursuant to 30-A M.R.S.A. § 3002(2), you will retain this copy of the complete text of the ordinance as a public record and make other copies available for distribution to the voters, and you will ensure that copies are available at the town meeting/polling places on the day of the vote.

Dated: Feb. 10<sup>th</sup>, 2023.

Kathy Littlefield  
[Signature]  
[Signature]

Town Selectmen

*I attest a true copy of the Town of Waldo's Solar Ordinance to me by the Selectmen*  
*Feb 12, 2023*  
*[Signature]*  
*Clark Waldo*

## TOWN OF WALDO SOLAR ORDINANCE

### Purpose

The Town of Waldo has established that the use of more solar energy and less reliance of fossil fuels is a current and long-term Town goal. Solar Energy System provisions are intended to assist the Town in addressing this goal in the following ways:

- a) To foster the use of solar energy equipment in the Town for the purpose of providing a source of renewable electricity and energy for heating and/or cooling;
- b) To establish clear guidelines and standards for the regulation of solar energy systems in the Town
- c) To provide for the effective removal of solar panels and associated utility structures that have been abandoned or are no longer in use for energy generation and transmission purposes; and
- d) To enable the Town to fairly and responsibly protect the public health, safety and welfare that could be adversely affected by the installation and operation of a solar energy system.

### Definitions

The following definitions shall apply to specific terms in this Division:

*Electricity Generation (production output).* The amount of electric energy produced by transforming other forms of energy, commonly expressed in kilowatt-hours (kWh) or megawatt hours (MWh).

*Electrical Equipment.* Any device associated with a solar energy system, such as an outdoor electrical unit/control box, that transfers the energy from the solar energy system to the intended location.

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

*Photovoltaic (PV) System.* A solar energy system that produces electricity by the use of semiconductor devices, called photovoltaic cells, which generate electricity when exposed to sunlight. A PV system may be roof-mounted, ground-mounted, or pole-mounted.

*Pole-Mount System.* A solar energy system that is directly installed on specialized solar racking systems, which are attached to pole, which is anchored and firmly affixed to a foundation in the ground, and wired underground to an attachment point at the building's meter. Pole-mounted systems can be designed to track the sun (with single-axis or dual-axis tracking motors) and to help maximize solar output throughout the year.

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

*Solar Access.* The access of a solar energy system to direct sunlight.

*Solar Array.* Multiple solar panels combined together to create one system.

*Solar Cell.* The smallest basic solar electric device that generates electricity when exposed to light; also reference Solar Energy System.

*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 (direct, diffuse and/or reflective) received from the sun.

*Solar Energy System.* A solar energy system whose primary purpose is to harvest energy by transforming solar energy into another form of energy or transferring heat from a collector to another medium using mechanical, electrical, or chemical means.

*Solar Energy System, Ground-Mounted.* A Solar Energy System that is structurally mounted to the ground and is not roof-mounted; may be of any size (small, medium, or large-scale).

*Solar Energy System, Large-Scale.* A Solar Energy System whose physical size based on total airspace projected over the ground is greater than 2,500 square feet of solar collectors.

*Solar Energy System, Medium-Scale.* A Solar Energy System whose physical size based on total airspace projected over the ground is greater than 1,000 square feet and less than 2,500 square feet of solar collectors.

*Solar Energy System, Off-grid.* A photovoltaic solar energy system in which the circuits energized by the solar energy system are not electrically connected in any way to electric circuits that are served by an electric utility.

*Solar Energy System, Roof-Mounted.* A Solar Energy System that is mounted on the roof of a building or structure; may be of any size, small, medium, or large-scale.

*Solar Energy System, Small-Scale.* A Solar Energy System whose physical size based on total airspace projected over the ground is less than 1,000 square feet of solar collectors.

*Solar Glare.* The potential for solar panels to reflect average sunlight, with an intensity sufficient to cause annoyance, discomfort, loss in visual performance or visibility, or a public safety hazard.

*Solar Panel (or module).* A device used for the direct or conversion of sunlight into useable solar energy, including electricity or heat.

*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 the collection of solar energy.

*Tilt.* The angle of the solar panels and/or solar collectors relative to horizontal.

### **Applicability**

This Division shall apply to all solar energy systems installed or engineered after XXXXX regardless of the size of the solar energy system, and shall apply to a solar energy system, including a system installed prior

to XXXXX, that is modified to materially alter the size or placement of the solar collectors or the originally permitted output of the solar energy system.

### **Permitting**

- (a) No solar energy system or device shall be installed or operated in the Town except in compliance with this ordinance, and if applicable, requirements of Shoreland Zoning Ordinance. The installation or modification of a solar energy system shall require a Town permit in accordance with the following procedures:
  - 1) A permit for a small-scale or medium-scale roof-mounted or ground-mounted solar energy system or a large-scale roof mounted solar energy system shall comply with all applicable standards in this Ordinance and shall require a building permit.
  - 2) A permit for a large-scale ground-mounted solar energy system shall comply with all applicable standards in this Ordinance and shall require a Site Plan permit from the Town and a building permit. The Planning Board shall conduct its review of a Site Plan permit application as written in the site plan Ordinance.

### **Application And Notification Requirements, All Permits**

- (a) Information to be provided for all applications for a solar energy system. An applicant for a solar energy system permit, at the time of application, shall, at a minimum, provide the following information to the Planning Board: name of property on which the system will be installed; the type of system that will be installed (roof or ground-mounted); the size of system to be installed, including the square feet of panels and if it is roof or ground mounted, the amount of square footage on the ground of the system; the approximate nameplate capacity of the system; the name of the installer; and the name of the owner of the system; does the property owner own the system or is it leased.
- b) Notification requirements for permits. The Applicant shall provide the following notifications to persons located within 1,000 feet of the property on which the system is proposed to be installed:
  - 1) Small- scale roof-mounted small energy system. No notification to abutters.
  - 2) Small or medium scale ground-mounted solar energy system or a medium-scale or large-scale roof-mounted solar energy system. The Applicant shall provide a letter to abutting property owners a minimum of fifteen days (15) prior to issuance of a permit.
  - 3) Large-scale ground-mounted solar energy system. Abutters and those within 1,000 feet of the property lines.

### **Permit Application Requirements for Large-Scale Solar Energy System**

An application for a large-scale ground-mounted solar energy system shall address applicable submission requirements identified in the Site Review Ordinance. Required Information and Format, and shall address the following specific additional requirements identified below. The Town also recognizes that certain Information requirements are not relevant to an application for a large-scale solar energy system, thus, the Planning Board shall have broad latitude in determining the Information requirements that do and do not apply.

- a) A description of the owner of the system, the operator if different, and detail of qualifications and technical ability of the owner or operator to construct, maintain and operate the facility.
- b) If the operator is leasing the site, a copy of the lease agreement (minus financial compensation) and any and all related easements clearly outlining the relationship of the respective parties, inclusive of the rights and responsibilities of the operator, landowner and any other responsible party with regard to the large-scale solar energy system and the term or duration of the agreement. Further, the operator shall identify any and all agreements or obligations of the landowner to the operator regarding any premises that are not specifically subject to the lease agreement, but which the operator has certain rights to use as part of the operation of the solar energy system.
- c) A description of the amount of energy to be produced and a general description of to whom the energy is intended to be sold.
- d) A copy of the agreement and schematic details of the connection arrangement with the transmission system that clearly indicates who is responsible for various requirements and how such will be operated and maintained.
- e) A basic description of the number and configuration of panels to be installed, including make and model, and associated major system components.
- f) A construction plan and timeline that identifies known contractors, site control, when project construction will commence and the anticipated date that the system will be on-line.
- g) An operations and maintenance plan for the projected operating life of the system;
- h) An emergency management plan that identifies potential hazards and the response to such hazards.
- i) Evidence of financial capacity to construct and operate the proposed facility;
- j) Identification of methods that the operator shall use to manage on-site vegetation.
- k) Identification of how the applicant shall address buffering requirements identified in this Ordinance.
- l) Submission of a decommissioning plan that addresses the requirements of this Ordinance.
- m) Evidence that the owner or operator, prior to issuance of a Site Plan permit by the Planning Board, has applied for any applicable permits with electricity provider that may be required for the installation of the proposed system; for example, a stormwater management permit from the State Department of Environmental Protection.

### **Permitted Use**

- a) The Shoreland Zoning districts in which a small, medium or large-scale roof-mounted or ground-mounted solar energy systems are a permitted in accordance with State of Maine Shoreland Zoning. In general, solar energy systems are a permitted use in most Shoreland Zones. The Resource Protection and Stream Protection districts, however, typically prohibit a solar energy system installation.

### **Dimensional Standards**

#### **(a) Height**

- (1) Ground-mounted solar energy systems. A ground-mounted solar energy system that is setback less than fifty (50) feet from any property line shall not exceed sixteen (16) feet in height when

oriented at maximum tilt. A ground-mounted system that is setback fifty (50) feet or more from any property line may be a maximum of thirty (30) feet in height when oriented at maximum tilt.

- (2) Pole mounted solar energy system. A pole mounted solar energy system that is located less than 50 feet from any property line may be a maximum of sixteen (16) feet in height. A pole mounted solar energy system that is located fifty (50) feet or more from a property line may be a maximum of thirty (30) feet in height.

**(b) Setbacks for Ground-Mounted Solar Energy Systems**

Setback standards for ground-mounted solar energy systems shall be as follows:

- (1) Minimum front yard setback: The minimum front yard setback for a ground-mounted solar energy system shall be as follows:
  - a) Small-scale ground-mounted solar energy systems. The solar energy system shall be setback a minimum of thirty (30) feet from road easement.
  - b) Medium-scale ground-mounted solar energy system. The solar energy system shall be setback a minimum of fifty (50) feet from road easement.
  - c) Large-scale ground-mounted solar energy system. The solar energy system shall be setback a minimum of fifty (50) feet from road easement.
- (2) Minimum side yard setback. The minimum side yard setback requirement for any ground-mounted solar energy system shall be as follows:
  - a) Small-scale ground-mounted solar energy system. The solar energy system shall be setback a minimum of fifteen (15) feet from any side lot line, provided the solar energy system, at full tilt, does not exceed a maximum height of sixteen (16) feet. Any solar energy system that is greater than sixteen (16) feet in height shall be setback a minimum of fifty (50) feet.
  - b) Medium-scale ground-mounted solar energy system. The solar energy system shall be setback a minimum of thirty (30) feet from any side lot line, provided the solar system, at full tilt, does not exceed a maximum height of sixteen (16) feet. Any solar energy system that is greater than sixteen (16) feet in height shall be setback a minimum of fifty (50) feet.
  - c) Large-scale ground-mounted solar energy system. The solar energy system shall be setback a minimum of fifty (50) feet from any side lot line.
- (3) Minimum rear yard setback. The minimum rear yard setback requirement for any ground-mounted solar energy system shall be as follows:
  - a) Small-scale ground-mounted solar energy system. The solar energy system shall be setback a minimum of fifteen (15) feet from any rear lot line, unless the height of the solar energy system

exceeds sixteen (16) feet, in which case the solar energy system shall be setback a minimum of fifty (50) feet.

- b) Medium-scale ground-mounted solar energy system. The solar energy system shall be setback a minimum of thirty (30) feet from any rear lot line, unless the height of the solar energy system exceeds sixteen (16) feet, in which case the solar energy system shall be setback a minimum of fifty (50) feet.
  - c) Large-scale ground-mounted solar energy system. The solar energy system shall be setback a minimum of fifty (50) feet from any rear lot line.
- (4) Minimum setback requirements for ground-mounted solar energy systems in accordance with Shoreland Zoning District.

A ground-mounted solar energy system that is a permitted use in a designated Shoreland Zoning District shall comply with the minimum structure setback requirement identified for the respective Shoreland Zoning District.

**(c) Vegetation Management**

The owner or operator of a medium-scale or large-scale ground-mounted solar energy system shall prepare a vegetation management plan associated with the operation of the system. A large-scale ground-mounted solar energy system, by its nature, may occupy a large land area. An application for a medium-scale or large-scale ground-mounted system shall identify measures it will use to effectively manage vegetation. Methods are to be vegetating the solar array area in a pollinator-friendly manner or allowing the area for the grazing of farm animals.

**Standards for All Roof-Mounted and Small-Scale Ground Mounted Solar Energy Systems**

- (a) All solar energy system installations shall be installed in compliance with the photovoltaic systems standards of the latest edition of National Fire Protection Association (NFPA) 1, Fire Prevention Code.
- (b) All wiring shall be installed in compliance with the photovoltaic systems standards identified in the latest edition of the National Electrical Code (NFPA 70).
- (c) Any connection to the public utility grid must be inspected and approved by the appropriate public utility.
- (d) Each solar energy installation shall be regularly maintained as necessary to ensure that it is operating safely and as designed over its useful life.

**Additional Standards for Medium-Scale and Large-Scale Ground-Mounted Solar Energy Systems**

A medium-scale and large-scale ground-mounted solar energy systems shall comply with the following standards:

- (a) **Utility Connections.** An applicant shall make reasonable efforts to locate 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 can be located above ground.
- (b) **Safety.** The solar energy system owner shall provide a copy of the site plan application submitted to the Planning Board for the review and comment of the Fire Chief. The Planning Board shall consider comments of the Fire Chief, if applicable, regarding the fire safety of the proposal in their review of a permit application.

### **Additional Standards for Large-Scale Ground-Mounted Solar Energy Systems**

A large-scale solar energy system shall comply with the following standards:

- (a) **Visual Impact and Buffering.** An applicant shall make reasonable efforts, as determined by the Planning Board, to minimize visual impacts associated with the installation of a large-scale solar energy system. The Board shall consider the size, location and topography of the site and the characteristics of the surrounding property and the amount and type of development on said properties in determining the amount and type of screening and buffering that it deems appropriate. Screening measures are required and may include but are not necessarily limited to the following: preserving natural vegetation, particularly in the setback area for the solar energy system; planting new vegetation, particularly in the setback area for the solar energy system; installing a raised berm and appropriate plantings, particularly in the setback area; and installing a fence.
- (b) **Glare.** Solar panels are designed to absorb (not reflect) sunlight; and, as such, solar panels are generally less reflective than other varnished or glass exterior housing pieces. However, solar panel placement should be prioritized to minimize or negate any solar glare onto nearby properties or roadways to the maximum extent practical. The Planning Board shall consider the results of the glare analysis in rendering a decision to approve or deny an application and any conditions of approval that it establishes on a permit application.
- (c) **Operations and Maintenance Plan.** The applicant shall submit a plan for the operation and maintenance of the large-scale solar energy system. The plan shall include measures for maintaining safe access to the installation as well as other general procedures for operational maintenance of the installation.
- (d) **Emergency Management and Services.** The owner of a large-scale solar energy system or operator shall prepare and provide a project summary, electric schematic, and site plan to the Planning Board and Fire Chief. Upon a request of the Fire Chief, the owner or operator shall cooperate with the Fire Department and other interested parties in preparing an emergency response plan. All Town emergency management personnel shall be provided the name and contact information of the party responsible for the operation of the system.
- (e) **Installation Conditions.** The owner or operator of the large-scale solar energy system shall maintain the facility in good condition on an ongoing basis during the time period that the solar energy system is in operation. Maintenance shall include but is not limited to the following: painting, structural repairs, ground maintenance around the array, maintaining buffering measures required by the Planning Board, maintaining the access road to the solar array, maintaining any stormwater management features required by the State or the Town, and maintaining the integrity of security measures.

- (f) **Vegetation Management.** The owner or operator of a large-scale ground-mounted solar energy system shall prepare a vegetation management plan associated with the operation of the system. A large-scale ground-mounted solar energy system, by its nature, may occupy a large land area. An application for a large-scale ground-mounted system shall identify measures it will use to effectively manage vegetation. Methods may include but are not limited to vegetating the solar array area in a pollinator-friendly manner and allowing the area for the grazing of farm animals.
- (g) **Signage.** The owner or operator shall install a sign that identifies the name of the owner, the name of the operator, and a 24 hour emergency contact phone number for the operator. The sign shall be no greater than 36 inches by 60 inches in size and shall be no more than 8 feet in height from the adjacent ground grade. The sign shall not be internally illuminated, however, if necessary, it can be illuminated by minimal lighting that complies with the following standards: the lighting is down-directed and shielded, and the lighting does not create any unreasonable glare on any adjacent road or neighboring property. The sign shall not display any advertising except for reasonable identification of the manufacturer or operator of the solar energy system.
- (h) **Removal of Solar Energy System.** A large-scale ground-mounted solar energy system that has reached the end of its useful life or that has been abandoned and not produced power for a period of twelve (12) consecutive months, shall be removed. The owner or operator shall provide notification to the Planning Board by certified letter of the proposed date of discontinued operations, and shall prepare and submit a plan to the Planning Board that identifies how all components of the solar energy system, including but not necessarily limited to the solar collectors, the mounting equipment, the transmission lines, and any security barriers shall be removed from the site. The Planning Board must review and approve the removal plan, and the owner or operator, no more than 150 days after the date of discontinued operations, must complete the removal of the solar energy system in accordance with the approved plan. Further, the owner or operator shall dispose of all solid and hazardous waste in accordance with all applicable local, state and federal waste disposal regulations. Post removal of the solar energy system, the owner or operator shall stabilize and re-vegetate the site as necessary to minimize soil erosion. The owner or operator shall contact the Planning Board for a final inspection of the removal of the system and to obtain a receipt of approval that the removal was performed successfully.
- (i) **Community Donation Option.** The operator of a ground-mounted solar energy system that has chosen to discontinue use of the system, may submit a plan for the review and approval of the Planning Board that identifies how the system can be donated to an appropriate community organization. Said plan shall identify the projected useful remaining life of the system, how the transfer shall occur, the responsibilities of the party that will receive the donation regarding the operation and maintenance of the system, the financial and technical ability of the party that the system is donated to successfully operate the system, and how the receiving party will fulfill the responsibility to decommission the system upon the end of its useful life. The Board shall have the authority to approve or deny the requested donation option. If the Board denies the donation option, the owner operator shall proceed to remove the system.
- (j) **Request to reactivate a discontinued large-scale solar energy system.** An owner or operator may submit a written request to the Planning Board to reactivate a large-scale solar energy system that has been discontinued or abandoned due to extenuating circumstances. The Planning Board shall be responsible for the review and approval or denial of any written request to reactivate a solar energy

system, subject to applicable review criteria for a new permit to operate the system. Unless the Board approves a request to reactivate the system, the solar energy system shall be considered abandoned.

(k) Decommissioning of large-scale solar energy system and abandonment guarantee.

- (1) Absent of a notice from the owner or operator of a date of decommissioning or written notice of extenuating circumstances and a request to reactivate the solar energy system, a large-scale solar energy system shall be considered to be abandoned when it fails to operate for a period of twelve or more consecutive months.
- (2) At the time of Planning Board review of a Site Plan application and permit, the applicant for a new large-scale solar energy system shall identify how it shall provide a performance guarantee payable to the benefit of the Town of Waldo, for all costs associated with the removal of an approved solar energy system that has been abandoned. The performance guarantee shall be equal to one hundred fifty (150) percent of the estimated cost of removal for the initial 10 year period of operation of the system. The applicant (owner), for each successive 10 year period that the solar energy system is in operation, shall be required to submit updated information to the Planning Board regarding all costs associated with the removal of an approved system, and the Board shall have the authority to identify the updated cost for the removal of the system. The applicant (owner), within 90 days of said determination by the Planning Board, shall provide the Town a new performance guarantee in the amount identified by the Planning Board.

A performance guarantee can be in the form of a performance bond, surety bond, letter of credit, parent holding company guarantee, escrow account established with the Town, or other form of financial assistance as may be acceptable to the Town as determined by the Planning Board and legal counsel for the Town of Waldo. The financial guarantee shall include a provision granting and guaranteeing the Town the authority to access the funds and property and perform the decommissioning if the facility is abandoned and the owner or operator fails to meet their obligations to remove the solar energy system. The applicant shall provide the Town the identified performance guarantee prior to the issuance of a building permit by Planning Board for the solar energy system. The owner or operator shall also be responsible for notifying the Town in writing if the performance guarantee is revoked, and in such cases, shall provide the Town a replacement guarantee that is found acceptable by legal counsel for the Town within ninety (90) days, or the owner's or operator's permit to operate the system shall be revoked.

- (3) If the owner or operator of the solar energy system fails to remove the installation in accordance with requirements of this Section within 150 days of abandonment or the proposed date of decommissioning, the Town retains the right to use the performance guarantee and all other available means to cause an abandoned, hazardous or decommissioned large-scale solar energy system to be removed.
- (4) If an owner or operator successfully removes a large-scale solar energy system in accordance with requirements and the Planning Board finds that the removal was successfully completed, the owner or operator may apply to the Planning Board for the release of the performance guarantee identified in this Section. The Town shall not unreasonably withhold the release of a performance

guarantee post a determination by the Planning Board that an owner or operator has successfully removed a solar energy system.

**USES IN THE SHORELAND ZONE**

Land Uses	Districts								
	SP	SD	RP	LR	UR	GDI	WD	MHC	
(44) Solar Energy System, Small, Roof & Ground Mounted	NO-12	PB	PB	PB	PB	PB	PB	PB	
(45) Solar Energy System, Medium, Roof & Ground Mounted	NO	PB	NO	PB	PB	PB	PB	PB	
(46) Solar Energy System, Large, Roof Mounted	NO	PB	NO	PB	PB	PB	PB	PB	
(47) Solar Energy System, Large Ground-Mounted	NO	NO	NO	PB	NO	PB	NO	NO	

**LAND USE STANDARDS**

**Solar Energy Systems**

- (a) A request to install a solar energy system in any Shoreland must comply with the Shoreland Zoning Ordinance.

**Effective Date of Ordinance Amendment**

- (a) The Town of Waldo adopted this Ordinance at its meeting of -----, 2022, and established that the effective date of these amendments shall be retroactive to 01/18, 2022.

Feb 12, 2023 I attest a true copy of the ordinance entitled "Town of Waldo Solar Ordinance" as certified to me by the municipal officer of Waldo on Feb 10, 2023

Alexander Smith: Clerk