

BUILDING AND DEVELOPMENT ORDINANCE

PROPOSED SECTION 9.5

SECTION 5: SOLAR FARMS AND SOLAR ARRAYS

EXEMPTIONS FROM SITE PLAN REVIEW

The following solar-related activities must follow the standards in this section but do not require site plan review by the Planning Board. They do require the submission of a Notice to Build Form.

1. Roof-mounted systems. Need to prevent overlarge "roof" that is just to get around this ordinance.
2. Ground-mounted systems less than 4, 200 square feet in area. (NOTE THAT THIS IS EQUIVALENT TO A 60 BY 70 FOOT BUILDING.)
3. One for providing electricity primarily to a farm.

SOLAR ENERGY CONVERSION SYSTEM SIZING:

Facility size is measured by calculating the horizontal square footage of solar panels when the panels are at their most horizontal angle.

See from Kristen.

No more than one system can be installed on a lot and no portion of a facility shall extend onto another lot.

SUBMISSION REQUIREMENTS:

In addition to the requirements in Article 8 of this ordinance, the following additional information shall be provided:

1. An operations, maintenance and decommissioning plan providing:
 - a. A description of the regular operation and maintenance of the facility, including the frequency and scope of regular inspections and the frequency and method of vegetation management,
 - b. The timeline and process of decommissioning of the system,
 - c. A licensed professional engineer's estimate for the cost of decommissioning the system. The Town of Whitefield may hire, at the applicant's expense, a qualified individual to review this estimate.
 - d. The amount of the guarantee equal to 150 percent of the estimated decommissioning, removal and restoration cost, provided by the applicant and certified by a professional array construction company. Types and contents of the guarantee can be:
 - d.i. An interest bearing escrow account - a cash contribution equal to the estimated removal cost or the establishment of an escrow account shall be made by either a certified check made out to the Town, direct deposit into a savings account, or purchase of a certificate of deposit. For any account opened by the applicant, the Town shall be named as owner or co-owner, and consent of the Town shall be required for any withdrawal.

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Any interest earned on the escrow account shall be retained in the account to cover any future inflationary changes in the cost of decommissioning. Any funds remaining in the account after decommissioning is complete shall be returned to the applicant.

- d.ii. Performance Bond – a performance bond shall detail the conditions of the bond, the method for release of the entire bond or portions of the bond to the Town, and the procedures for collection by the municipality. The bond documents shall specifically reference the array facility for which approval is sought.
 - d.iii. Irrevocable Letter of Credit from a bank or other lending institution shall indicate that funds have been set aside for the removal of the array facility and may not be used for any other project or loan.
 - e. General liability insurance. The owner/operator of the facility shall maintain a general liability insurance policy of at least \$1000000 by occurrence, \$2000000 in aggregate, or \$5000000 excess liability (umbrella policy.)
2. Solar System specifications, including manufacturer, model and facility size.
 3. Certification that layout, design, and installation conforms to and complies with all applicable industry standards such as the National Electrical Code (NEC/NFPA-70), the American National Standards Institute (ANSI), the Underwriters Laboratories (UL), the American Society for Testing and Materials (ASTM), the Institute of Electric and Electronic Engineers (IEEE), the Solar Rating and Certification Corporation (SRCC), the Electrical Testing Laboratory (ETL), and other similar certifying organizations, the Maine Uniform Building and Energy Code (MUBEC), the fire and life safety codes (NFPA 1 and NFPA101), and any other standards applicable to solar energy conversion systems.
 4. Certification that the project complies with the utility notification requirements contained in Maine law and accompanying regulations through the Maine Public Utilities Commission, unless the applicant intends, and so states on the application, that the system will NOT be connected to the electricity grid.
 5. A wildlife and habitat impact survey by the Maine Natural Areas Program and a project evaluation and essential habitat and threatened species review from the Department of Inland Fisheries and Wildlife (DIFW) indicating that the proposed installation will have no undue negative habitat or wildlife impact.

GENERAL OPERATIONS

Irrespective of any other provisions in this section of this ordinance, the owner or operator of a Ground Mounted Solar Energy System shall build, operate and maintain it in compliance with all relevant Federal, State and Local laws, regulations and ordinances.

GENERAL SITING REQUIREMENTS

1. Preference should be given to locating Ground Mounted Solar Energy Conversion Systems on land previously developed, degraded or marginally productive in nature. No topsoil or prime agricultural soil shall be removed from the site. For the installation of the system.

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2. Ground Mounted Solar Energy Conversion Systems shall be sited to minimize or negate any solar glare onto nearby properties or roadways without unduly affecting the functionality or efficiency of the system.
3. Installations shall not be done so as to obstruct solar access to neighboring properties and shall be a nonreflective color that blends the system and its components into the surrounding landscape to the greatest extent possible and incorporates non-reflective surfaces to minimize any visual disruptions.

DIMENSIONAL REQUIREMENTS

1. Perimeter fencing around the project area shall be set back at least 100 feet from all property lines and 100 feet from the center line of a public way.
2. All other structures including solar arrays, transformers, security buildings, etc. shall be at least 100 feet from all side and rear property lines and 100 feet from the centerline of any public way.
3. Height: Height requirements for ground mounted Commercial / Community Solar Energy Facility panels shall not exceed 20 feet, as measured from the highest natural grade below each panel. The minimum clearance of panel from the ground shall be 4 feet to allow grazing or mowing of vegetation. The height restrictions exclude utility poles, substation structures and antennas constructed for the project.
4. Lot Coverage: Lot coverage for commercial community solar energy facilities shall be defined as the percentage of the lot covered by all buildings, driveways, parking areas, other areas where vegetation is removed, and all of the area enclosed within the required commercial community solar energy facility fencing.

FENCING: All fencing must meet the following criteria:

1. It must be at a minimum height to meet the National Electrical Code standard for a fence that does not require barbed wire at the top.
2. It must blend in to the natural environment as well as possible by being an unobtrusive color and style.
3. It must be wildlife-friendly by allowing animals such as racoons, rabbits and other small animals to pass through the bottom portion of the fence.
4. A minimum 5 foot cleared space shall be maintained on the outside of the fence to facilitate inspection and maintenance of the fence over the life of the project.
5. It must be maintained in good working order for the life of the facility.

FIRE SUPPRESSION ISSUES.

For purposes of emergency services, the owner or operator of a Ground Mounted Solar Energy System shall provide a copy of the project summary, electrical schematic, and site plan to the Whitefield Fire Chief. Upon request, the owner or operator shall cooperate with the Fire Department in developing an Emergency Response Plan. All means of shutting down the system shall be clearly marked on the plan. A noxbox available to the Fire Chief shall be installed at the main gate into the facility. The plan shall also address initial and on-going

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training needs for the Fire Department should a fire occur at the facility up to, and including, the owner or operator shall provide such training when requested by the Fire Chief. The owner or operator shall identify a responsible person to the Code Enforcement Officer and the Fire Chief for public inquiries throughout the life of the installation.

GLARE: Array placement must be designed to minimize or negate any solar glare onto nearby properties and shall not result in any glare onto nearby public roadways.

LIGHTING: Commercial / Community Solar Energy Facility lighting shall be limited to that required for safety and operational purposes. All lighting provided at the site shall be motion sensor controlled preferred, shielded and downcast such that the light does not spill onto adjacent parcels or night sky.

NATURAL SCREENING: Natural forested vegetation shall be left around the perimeter of the facility to a depth of at least 40 feet from all property lines and the road. If no forested cover exists on the property, then a visual screening hedge shall be installed. Such a hedge shall be composed of evergreen vegetation (such as evergreen) that will attain a height of at least 7 feet within 5 years. Such a hedge shall be planted in three rows with plants spaced 6 feet apart within a row and rows spaced 8 feet apart. Plants in different rows shall be offset by 2 feet to create a uniform visually blocking hedge.

NOISE: No Commercial /Community Solar Energy Facility shall be located or operated so as to create a decibel level greater than 40 decibels at the property line of the parcel in which the Commercial / Community Solar Facility is located.

Within 12 months after the date when the Commercial / Community Solar Energy Facility project is fully operational the operator shall conduct a two- phase post construction sound study conducted by an independent, accredited sound engineer chosen by the Town of Whitefield and paid for by the applicant / owner. Post construction sound level measurements shall be taken with all solar energy systems running and with all solar energy systems off. The sound measurements shall be reported to the planning board and made available to the public.

SIGNAGE: Signage and advertising shall be limited to that which provides identification and contact information of the owner and/or operator or which provides safety or warning messages to the public. Signs providing owner information shall be located at any gates through the fencing into the system plus at the transformer. Electrical warning signs shall be located all along the fencing spaced at 250 foot intervals.

TOPSOIL REMOVAL: No topsoil shall be removed from the site. Any soil dug up during construction or maintenance activities shall be spread over the site.

VEGETATION MANAGEMENT PLAN: The Owner or Operator shall submit a vegetation management plan approved by the Fire Chief. Or his/her designee. The plan must indicate that the vegetation growth will be maintained under and around the installation at levels needed to reduce the risk of ignition from the electrical system while minimizing mowing or other mechanical processes to the maximum extent possible. Native, pollinator-friendly seed mixtures shall be used. Herbicides, defoliant or pesticides are not to be used for vegetation management.

If a hedge is planted, the plan shall include how the hedge will be established and maintained over the life of the project such that it continues to provide visual screening of the site.

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ROUTINE MAINTENANCE AND REPAIR: The owner or operator of the Ground Mounted Solar Energy Conversion System shall maintain all components of the system in good working order during the entire lifetime of the system.

The owner or operator shall visually inspect the integrity of the perimeter fence at least annually to ascertain that it is still structurally sound and has not been breached in any way. Should there be any issues, the owner or operator shall repair any breaches or problems with the fence that jeopardize its function of preventing access to the site.

The owner or operator shall make sure that the primary entrance gate is accessible and functions properly so that access to the site can occur at any time of the year.

DECOMMISSIONING/ABANDONMENT

Any Ground Mounted Solar Energy Conversion System that has reached the end of its useful life, ceases to generate power or has been abandoned shall be removed pursuant to a plan approved by the Whitefield Planning Board during the application process. The owner or operator shall physically remove all components of the installation within 180 days after discontinuance of operations, cessation of power generation or abandonment of the facility. The owner or operator shall notify the Code Enforcement Officer by certified mail of the proposed date of discontinuance, cessation or abandonment and plans for removal.

Decommissioning shall consist of the physical removal of all components of the Ground Mounted Solar Energy Conversion System including solar arrays, support posts, foundations, wiring, fencing, transformers, poles and any other support equipment for the facility. All such material shall be disposed of in a safe and appropriate manner. See Barre MA.

The site will be stabilized to minimize soil erosion. The Planning Board may allow the owner or operator to leave landscaping or designated below ground foundations in order to minimize erosion or the disruption of extant vegetation. Any areas of exposed soil shall be revegetated with native, pollinator-friendly seed mixtures.

In the event that the Ground Mounted Solar Energy Conversion System is not removed within 180 days of cessation of generating activities or is abandoned for more than 180 days, , the Town of Whitefield will initiate removal using the performance guarantee set aside by the applicant for that purpose.

SURETY

Every five years after the initial effective date of the surety, the owner or operator shall submit an updated engineer's estimate and surety to the Town for review and approval. The Town may hire, at the owner or operator's expense, a qualified individual to review the engineer's estimate.

The Planning Board may modify or waive the requirements for surety when the Planning Board determines that because of special circumstances or the site or project, such application requirements or standards would not be applicable or would be an unnecessary burden upon the applicant and would not adversely affect the general health, safety, and welfare of the Town.

DEFINITIONS

SOLAR ENERGY: Electromagnetic energy transmitted from the sun.

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SOLAR ENERGY CONVERSION SYSTEM: A solar energy conversion system that converts solar energy to electric or thermal energy. A ground mounted facility is one where the support poles for the solar panels are affixed to the ground through some type of foundation system or pole system. For purposes of this ordinance, the following sizes of such facilities are recognized by the Town:

- Small scale solar energy conversion system: A system smaller than 1,500 square feet.
- Medium scale solar energy conversion system: A system between 1,500 and 15,000 square feet inclusive in area.
- Large scale solar energy conversion system: A system 15,000 square feet or larger.

SOLAR FARM: See Solar Energy Conversion System. Note that a solar farm is in no way an agricultural activity but falls under the definition of an industrial activity.

A solar photovoltaic system that is for the exclusive purpose of providing electricity for a property that is primarily in agricultural use as defined under MGL c. 40A, § 3. The electricity produced to be used solely for the benefit of the agricultural property.