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or other form of financial guarantee acceptable to the Board, to cover the cost of removal of the facility and the remediation of the landscape, should the facility cease to operate.

7.9 Large-Scale Ground-Mounted Solar Photovoltaic Installation

7.9.1 Purpose and Intent: The purpose of this bylaw is to promote the creation of new large-scale ground-mounted solar photovoltaic installations by providing standards for the placement, design, construction, operation, monitoring, modification and removal of such installations that address public safety, and minimize impacts on scenic, natural and historic community resources.

The provisions set forth in this section shall apply to the construction, operation, and/or repair of large-scale ground-mounted solar photovoltaic installations in any zoning district.

This section applies to large-scale ground-mounted solar photovoltaic installations proposed to be constructed after the effective date of this section. This section also pertains to physical modifications that materially alter the type, configuration, or size of these installations or related equipment.

Solar installations with a rated nameplate capacity of less than two hundred-fifty kilowatts (250 kW) direct current (DC) are not subject to this Bylaw and shall instead be considered either an above-ground utility under Section 4.4.3 or an accessory use.

7.9.2 Definitions: As used in this Section, the following terms shall have the meanings indicated:

7.9.2.1 Large-Scale Ground-Mounted Solar Photovoltaic Installation: A solar photovoltaic system that is structurally mounted on the ground and is not roof-mounted, and has a rated nameplate capacity of at least two hundred-fifty kilowatts (250 kW) direct current (DC).

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

7.9.2.3 Solar Photovoltaic Array: an arrangement of solar photovoltaic panels.

7.9.3 General Requirements for all Large-Scale Ground-Mounted Solar Photovoltaic Installations: The following requirements apply to all large-scale ground mounted solar photovoltaic installations.

7.9.3.1 Site Plan Review: Large-scale ground-mounted solar photovoltaic installations are subject to site plan review by the Planning Board. Proponents shall submit site plans showing:

- (a) existing conditions, including property lines, physical features and roads,
- (b) proposed changes to the landscaping of the site, including grading, vegetation to be cleared, new plantings, exterior lighting, and screening vegetation,

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- (c) the proposed layout of the large-scale ground-mounted solar photovoltaic installation, including all appurtenant structures,
- (d) driveways and other means of access to the site of the large-scale ground-mounted solar photovoltaic installation, and
- (e) other reasonable documentation requested by the Planning Board.

7.9.3.2 *Site Control:* The project proponent shall submit documentation of actual or prospective access and control of the project site sufficient to allow for construction and operation of the proposed large-scale ground-mounted solar photovoltaic installations.

7.9.3.3 *Security:* Adequate security measures and fencing shall be provided to control access to the large-scale ground-mounted solar photovoltaic installation in order to prevent unauthorized access. The use of barbed wire or razor wire fencing is prohibited.

7.9.3.4 *Operation & Maintenance Plan:* The project proponent shall submit a plan for the operation and maintenance of the large-scale ground-mounted solar photovoltaic installation, which shall include measures for maintaining safe access to the installation, stormwater controls and general procedures for operations and maintenance of the installation.

7.9.3.5 *Utility Notification:* No large-scale ground-mounted solar photovoltaic installation shall be constructed until evidence has been given to the Planning Board that the Concord Municipal Light Plant (CMLP) has been informed of the solar photovoltaic installation owner or operator's intent to install an interconnected customer-owned generator. Off-grid solar photovoltaic arrays shall be exempt from this requirement. The Building Commissioner may issue a permit only if the large-scale ground-mounted solar photovoltaic device complies with this section.

7.9.3.6 *Waivers:* If the installation does not comply with one or more of the Dimensional Requirements or Design Requirements, the applicant shall be required to apply for a special permit from the Planning Board seeking waivers from any such requirement(s). The Planning Board may grant requested waivers upon a finding that such waiver(s) will not derogate from the intent of this bylaw or be detrimental or injurious to the public.

7.9.4 *Dimensional Requirements:*

7.9.4.1 *Lot Area:* For large-scale ground-mounted solar photovoltaic installations, the minimum lot area shall be 5 acres.

7.9.4.2 *Setbacks:* For large-scale ground-mounted solar photovoltaic installations, front, side and rear setbacks shall be as follows:

- (a) Front yard: The front yard setback shall be at least 50 feet.
- (b) Side yard: Each side yard shall have a setback of at least 50 feet.
- (c) Rear yard: The rear yard setback shall be at least 50 feet.

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Where a proposed large-scale ground-mounted solar photovoltaic installation does not abut a residential zoning district or use, the Planning Board may waive the above dimensional requirements for front, side and rear yard setbacks by special permit as provided in subsection 7.9.3.6. In no case, however, shall the front, side or rear yard setback be less than 10 feet.

7.9.4.3 Appurtenant Structures: All appurtenant structures to large-scale ground-mounted solar photovoltaic installations shall be subject to reasonable regulations concerning the bulk and height of structures, lot area, setbacks, open space, parking and building coverage requirements. All such appurtenant structures, including but not limited to, equipment shelters, storage facilities, transformers, and substations, shall be architecturally compatible with each other. Whenever reasonable, structures should be screened from view by vegetation and/or joined or clustered to avoid adverse visual impacts.

7.9.5 *Design Requirements*

7.9.5.1 Lighting: Lighting of the large-scale ground-mounted solar photovoltaic installations and appurtenant structures shall be limited to that required for safety, security, and operational purposes, and shall be reasonably shielded from abutting properties. Lighting of the solar photovoltaic array and appurtenant structures shall be directed downward and shall incorporate full cut-off fixtures to reduce light pollution.

7.9.5.2 Signage: Signs appurtenant to the large-scale ground-mounted solar photovoltaic installation shall comply with the Town's Sign Bylaw. A sign consistent with the Town's Sign Bylaw shall be required to identify the owner and provide a 24-hour emergency contact phone number.

Large-scale ground-mounted solar photovoltaic installations shall not be used for displaying any advertising except for reasonable identification of the manufacturer, owner or operator of the large-scale ground-mounted solar photovoltaic installation.

7.9.5.3 Screening / Landscape Buffer: At a minimum, half of the provided side and rear yard setback areas shall be designed to reduce the visual impact of the solar photovoltaic array upon adjacent property by use of trees, shrubs, walls, fences, or other landscape elements. Where the area to be developed abuts land developed for residential use, suitable landscaping shall consist of a substantially sight-impervious screen of evergreen foliage at least eight (8) feet in height or planting of shrubs and trees complemented by a sight-impervious fence of at least five (5) feet, but not more than eight (8) feet, in height, or such other type of landscaping as may be required under site plan review.

7.9.5.4 Utility Connections: Reasonable efforts shall be made to place all utility connections from the large-scale ground-mounted solar photovoltaic installation underground, depending on appropriate soil conditions, shape, and topography of the site, any requirements of the CMLP and other site permitting requirements. Where an aboveground connection solution already exists, it may be used if it meets the

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requirements of the CMLP, and electrical transformers for utility interconnections may be located aboveground if required by the CMLP.

7.9.5.5 Stormwater Management: Best management practices shall be used for controlling and managing stormwater run-off and drainage for the large-scale ground-mounted solar photovoltaic installation in compliance with all applicable federal, state and local regulations.

7.9.6 Safety and Environmental Standards:

7.9.6.1 Emergency Services: The large-scale ground-mounted solar photovoltaic installation owner or operator shall provide a copy of the project summary, electrical schematic, and site plan to the local fire chief and CMLP. Upon request, the owner or operator shall cooperate with local emergency services in developing an emergency response plan. All means of shutting down the solar photovoltaic installation shall be clearly marked. The owner or operator shall identify a responsible person for public inquiries for as long as the installation is in active use.

7.9.6.2 Land Clearing, Soil Erosion and Habitat Impacts: Clearing of natural vegetation shall be limited to what is necessary for the construction, operation and maintenance of the large-scale ground-mounted solar photovoltaic installation or otherwise prescribed by applicable laws, regulations, and bylaws. Clearing to minimize shading is acceptable.

7.9.7 Maintenance and Modifications:

7.9.7.1 Physical Conditions: The large-scale ground-mounted solar photovoltaic installation owner or operator shall maintain the installation in good condition. Maintenance shall include, but not be limited to, painting, structural repairs, and integrity of security measures. Site access shall be maintained to a level acceptable to the local Fire Chief, CMLP and emergency medical services. The owner or operator shall be responsible for the cost of maintaining the solar photovoltaic installation and any access driveway.

7.9.7.2 Modifications: All substantial material modifications or changes to a large-scale ground-mounted solar photovoltaic installation require site plan review by the Planning Board and acceptance by the CMLP.

7.9.8 Abandonment or Decommissioning:

7.9.8.1 Removal Requirements: Any large-scale ground-mounted solar photovoltaic installation which has reached the end of its useful life, is no longer operational or has been abandoned consistent with Section 7.9.8.2 of this bylaw shall be removed. The owner or operator shall physically remove the installation no more than 150 days after the date of discontinued operations. The owner or operator shall notify the Planning Board, Building Commissioner and CMLP by certified mail of the proposed date of discontinued operations and plans for removal. Decommissioning shall consist of:

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- (a) Physical removal of all large-scale ground-mounted solar photovoltaic installations, structures, equipment, security barriers and transmission lines from the site.
- (b) Disposal of all solid and hazardous waste brought to the site or generated by the owner or operator or otherwise related to the large-scale ground-mounted solar photovoltaic installation in accordance with local, state, and federal waste disposal law and regulations.
- (c) Stabilization or re-vegetation of the site as necessary to minimize erosion. The Planning Board may allow the owner or operator to leave landscaping or designated below-grade foundations in order to minimize erosion and disruption to vegetation.

7.9.8.2 Abandonment: The large-scale ground-mounted solar photovoltaic installation shall be considered abandoned when it does not operate for more than one year. If the owner or operator of the large-scale ground-mounted solar photovoltaic installation fails to remove the installation in accordance with the requirements of this section within 150 days of abandonment or the proposed date of discontinued operations, the Town may enter the property and physically remove the installation.

7.9.8.3 Financial Assurance: Proponents of large-scale ground-mounted solar photovoltaic installations shall be required to enter a covenant with the Planning Board to ensure adequate funds are available to provide for decommissioning and removal of the installation.

7.10 Public Service Corporation Overlay District (PSCOD)

7.10.1 Purpose. The purpose of the Public Service Corporation Overlay District (PSCOD) is to provide a mechanism for the approval of uses by public service corporations including but not limited to wastewater treatment, municipal public works operations, large-scale ground mounted solar photovoltaic installations, and peaking power plants.

7.10.2 Definitions. Within this Section, the following terms shall have the following meanings:

- (a) *Public Service Corporation (PSC):* Facilities, equipment, and structures necessary for conducting a service by a public or private utility facility. Such facilities shall include public or private wastewater treatment facilities, large-scale ground mounted solar photovoltaic installations, and peaking power plants.
- (b) *Public Service Project (PSP):* A project sponsored by a PSC, including facilities, equipment, and structures necessary for conducting a service by a public, private or quasi-private utility facility.
- (c) *Peaking Power Plant:* A power plant that generally runs only when there is a high demand for energy.