

Planning Board Zoning Regulations
Section 176-11.0 Solar Energy System Regulations
(approved September 9, 2021)

11.0 Solar Energy Systems.

The installation and maintenance of Solar Energy Systems (SESs) within Lexington are encouraged to promote Lexington’s Net Zero initiative directives. The Planning Board has developed these Solar Energy System Regulations (“SES Regulations”) to guide applicants for Canopy, Large-scale, and Small-scale SESs, where applicable.

11.1 Design Requirements.

Canopy, Large-scale, and Small-scale SESs shall comply with the following design requirements.

1. The location, style, and screening shall be designed to minimize the impacts on surrounding properties, maintain safe accessibility, limit stormwater runoff, and manage impacts to groundwater and soils.
2. Safety and security features shall favor fencing and other visible perimeter safety and security measures. The use of chain-link fences is strongly discouraged for residential projects.
3. The visual impact of any ground-mounted structure, including all accessory structures and appurtenances, shall be mitigated. All accessory structures and appurtenances shall be architecturally compatible with each other. SESs and associated infrastructure shall be shielded from view and clustered to avoid adverse visual impacts. Methods such as the use of landscaping, natural features, and opaque fencing shall be utilized.
4. All utility connections from an SES shall be underground unless expressly permitted otherwise. Electrical transformers, inverters, switchgear, and metering equipment to enable utility interconnections may be above ground if required by the utility provider.
5. Land clearing, soil erosion, and habitat clearing of natural vegetation and trees shall be limited to the necessary construction, operation, and maintenance of the SES or otherwise prescribed by applicable laws, regulations, and bylaws.

11.2 Utilities.

1. Transformers and other associated infrastructure that create a noticeable noise shall be located as far as possible from abutting residential structures, wetlands, natural habitats, agricultural lands, and protected open space areas.
2. Lighting associated with SES shall be zero at all lot boundaries. The lighting of other parts of the installation, such as appurtenant structures, shall be limited to that required for safety and operational purposes and shall be reasonably shielded from abutting properties. Where feasible, lighting of the SES shall be directed downward and shall incorporate full cut-off fixtures to reduce light pollution.

11.3 Canopy Solar Energy Systems.

1. Columns and associated supports shall be located to ensure full use of any off-street parking space by a vehicle.
2. When the lower edge of a Canopy SES is less than fourteen (14) feet above ground level, the Applicant shall install appropriate signage to ensure a vehicle does not damage the SES.
3. Landscaping for parking lots under a Canopy SES shall be designed to manage runoff from the panels and be shade tolerant.

11.4 Small-scale Solar Energy Systems.

1. Small-scale SESs shall be incorporated into the landscaping or topographical features when possible

to mitigate the appearance of such structures.

11.5 Large-scale Solar Energy Systems.

1. Utility Notification - No Large-scale SES intended to be interconnected with an electrical grid shall be constructed until evidence has been given to the Planning Board that the utility company that operates the electrical grid where the installation is to be located has been informed of the owner or operator's intent to install an interconnected customer-owned generator. Proof of a fully executed mutual agreement with the utility company shall be provided to the Planning Board.
2. Maintenance - The Large-scale SES owner or operator shall maintain the facility 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 Fire Chief, Police Chief, Town Engineer, Building Commissioner, and Planning Board. The owner or operator shall be responsible for the cost of maintaining the solar photovoltaic installation and any access roads unless said access roads are accepted as public ways.
3. Emergency Services - The Large-scale SES owner and operator shall provide a copy of the project summary, electrical schematic, and the approved site plan to the Fire Chief. The owner or operator shall provide an emergency response plan to the Building Department, the Planning Department, Fire Department, the Police Department, and the Department of Public Works (DPW). The emergency response plan is subject to the Building Department, the Planning Department, Fire Department, the Police Department, and the Department of Public Works (DPW). It shall include, at minimum, explicit instructions on all means of shutting down the Large-scale SES, which shall be marked. The owner or operator shall identify a responsible person for public inquiries throughout the life of the installation and immediately notify the parties as mentioned above of any change to the responsible person and his/her contact information
4. Safety and Security - Safety and security measures shall be subject to the approval of the Building Department, the Planning Department, Fire Department, Police Department, and the Department of Public Works prior to the issuance of a building permit. The owner or operator shall be required to provide emergency services with training on all equipment and procedures referenced in the emergency response plan or which might otherwise be necessary for emergency services to operate or perform.

The owner or operator shall be required to provide a Knox Box (a secure, tamper-proof storage box for keys or other access tools) at each locked entrance to the facility and maintain a complete set of all keys or devices required to gain emergency access to all areas, buildings and equipment of the facility in each Knox Box.

5. All appurtenant structures to Large-scale SES shall be subject to the Lexington Zoning Bylaw dimensional and density 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 shaded from view by vegetation or other means and joined or clustered to avoid adverse visual impacts.
6. Closure plan.
 - a. Without notice of a proposed date of decommissioning or written notice of extenuating circumstances, the Large-scale SES shall be considered abandoned when it fails to operate for more than one (1) year without obtaining the Planning Board's written consent to so suspend operation. If the owner or operator of the Large-scale SES fails to remove the installation following the requirements of this section within one-hundred and fifty (150) days of abandonment or the proposed date of decommissioning, the Town may enter the property and physically remove the installation.
 - b. Any Large-scale SES, which has reached the end of its useful life or has been abandoned, shall be

removed. The owner or operator shall decommission the installation no more than one-hundred and fifty (150) days after the date of abandonment or the proposed date of decommissioning. The owner or operator shall notify the Building Commissioner by certified mail of the proposed date of discontinued operations and plans for decommissioning. Decommissioning shall consist of:

- i. Physical removal of all Large-scale SES structures, equipment, security barriers, and transmission lines from the site.
- ii. Disposal of all solid and hazardous waste in accordance with local, state, and federal waste disposal regulations.
- iii. Stabilization or re-vegetation of the site as necessary to minimize erosion. The Building Commissioner may allow the owner or operator to leave landscaping or designated below-grade foundations to minimize erosion and disruption to vegetation.

7. Financial Security.

- a. The owner or operator of a Large-scale SES shall provide a non-cancellable surety bond or another form of surety approved by the Planning Board to cover the removal cost if the Town must remove the installation and remediate the landscape.
- b. The Planning Board shall review the amount and form of the surety bond or other form of surety, but in no event shall it exceed more than one-hundred and twenty-five (125) percent of the estimated cost of removal and compliance with the additional requirements set forth herein, as determined by the Planning Board.
- c. The Applicant, owner, or operator shall submit a fully inclusive estimate of the costs associated with removal, prepared by a qualified professional engineer licensed in the Commonwealth of Massachusetts, which the Planning Board shall review. The amount shall include a mechanism for calculating increased removal costs due to inflation.
- d. The owner or operator shall submit a revised fully inclusive decommissioning estimate every five (5) years to the Planning Board for review. Once reviewed, the amount of surety shall be adjusted accordingly.