

**Proposed Zoning Bylaw Amendment relating to the regulation of
Battery Energy Storage Facilities**

PUBLIC HEARING DRAFT
with Town Counsel Comments 12.20.2021

Section 2 Definitions

PUBLIC UTILITY: shall include power lines, power transmission, power generation facilities, and telecommunication facilities (See Section §8.6) but shall exclude solar energy installations, solar energy facilities, small scale battery energy storage systems, and battery energy storage facilities (See §8.9). A public utility may be privately owned but is otherwise regulated by the Mass Department of Public Utilities, the Federal Communications Commission, the Federal Energy Regulatory Commission, or other governmental agencies.

5.2.8 ID. Industrial District

(a) Permitted Uses:

- i. Business office or professional office
- ii. Manufacturing, processing, or research
- iii. Bulk storage, warehousing, distribution
- iv. Agriculture or forestry products processing

(b) Uses allowed by Special Permit from the Planning Board

- i. All uses in §5.2.8(a) that involve the construction or alteration of over 20,000 square feet of floor area or the development of over 217,800 square feet (5 acres) of land.
- ii. Solar energy and battery energy storage facilities, per §8.9
- iii. Self-service storage facilities, per §8.7
- iv. Retail sales and services
- v. Hotels
- vi. Earth removal, per §8.2
- vii. Open recreational enterprises
- viii. Public utilities
- ix. Marijuana cultivation, production, research, or testing, medical marijuana treatment center, or retail if accessory to cultivation or production as a primary use, per §8.10
- x. Other uses similar to §5.2.8(a) in externally observable attributes.

5.2.9 HI. Historic Industrial District

(a) Permitted Uses:

- i. Business, professional, or medical office in an existing building
- ii. Retail sales and services in an existing building
- iii. Manufacturing, processing, or research in an existing building
- iv. Bulk storage, warehousing, distribution in an existing building

- v. Craft workshop or light assembly shop in an existing building
- (b) Uses allowed by Special Permit from the Planning Board:
- i. Uses listed in § 5.2.9(a) that are in new structures or additions to existing buildings
 - ii. Multi-family dwelling
 - iii. Hotels
 - iv. Public utilities
 - v. Solar energy and battery energy storage facilities, per §8.9
 - vi. Marijuana retailer, medical marijuana treatment center, cultivation, production, research or testing, per §8.10
 - vii. Self-service storage facilities, per §8.7
 - viii. Open recreational enterprises
 - ix. Farming and forestry on 5 acres or less
 - x. Other uses similar to § 5.2.9(a) in externally observable attributes.
- (c) Special Requirements
- i. Demolition of an existing structure requires a special permit from the Planning Board, excepting structures that have been deemed unsafe by the Inspector of Buildings.

8.9 Solar Energy Installations & Facilities and Battery Energy Storage Facilities

8.9.1 Purpose

To facilitate the transition from fossil fuels to renewable energy through the following:

- To encourage solar energy collection on roofs, over parking lots, and on degraded areas and to minimize the environmental impact when that is not otherwise practical.
- To allow properly sited battery energy storage facilities.

8.9.2 Definitions

BUILDING MOUNTED SOLAR ENERGY INSTALLATION: A solar energy installation that is permanently affixed to a building, as defined by the building code. This definition is inclusive of canopy structures.

ACCESSORY GROUND MOUNTED SOLAR ENERGY INSTALLATION: A solar energy installation that primarily supports on-site energy needs that is mounted on the ground, either directly or on supports which do not constitute a building under the building code.

SOLAR ENERGY FACILITY: a ground-mounted solar energy installation that exceeds 2,000 square feet of panel surface area. Solar Energy Facilities shall not constitute a Public Utility for the purposes of this bylaw.

BATTERY ENERGY STORAGE FACILITY: a physical container providing secondary containment to one or more battery cells for storing electrical energy that is equipped with cooling, ventilation, fire suppression, and an electronic battery management system. It may be a primary use or accessory to a solar energy facility, power generation facility, an electrical substation or other similar uses. Battery Energy Storage Facilities shall not constitute a Public

Utility for the purposes of this bylaw. For the purpose of this bylaw, the aggregate rating of the facility shall exceed 80 kWh. (or some other kWh).

SMALL SCALE BATTERY ENERGY STORAGE SYSTEM: a battery storage system that is ancillary to a residential, commercial, or industrial use. For the purpose of this bylaw, the aggregate rating of the system shall not exceed 80 kWh.

8.9.3 Building Mounted Solar Energy Installations

Building Mounted Solar Energy Installations are permitted in all zoning districts.

8.9.4 Accessory Ground-Mounted Solar Energy Installations

Ground Mounted Solar Energy Installations shall be considered an accessory structure and shall meet the setback requirements of the Zoning District in which it is located. Ground-Mounted Solar Energy Installations are permitted in accordance with the following table:

Zoning District	Requirement
Neighborhood Business, Central Business, and Recreation-Education	Special Permit Required
RS-1	Special Permit Required if exceeding 150 square feet of panel surface area
All other districts	Special Permit Required if exceeding 500 square feet of panel surface area

8.9.5 Solar Energy Facilities and Battery Energy Storage Facilities

Solar Energy Facilities and Battery Energy Storage Facilities are allowed in the Industrial and Historic-Industrial Districts by Special Permit and Site Plan Review from the Planning Board, subject to the submittal requirements and standards of this section. The Planning Board may require additional conditions or vary the prescribed conditions upon a finding that such action is reasonably necessary to meet the purpose and intent of the Bylaws.

- (a) Required Submittals. In addition to the required Site Plan elements in §9, the following materials are required for permitting approval of Solar Energy and Battery Storage Facilities:
 - i. A plan for the general procedures of operation and maintenance of the installation including security measures, maintenance of emergency access and the clear and available means of shutting down the facility in the event of an emergency.
 - ii. A fully inclusive estimate of the costs associated with removal and site restoration, prepared by a professional engineer.
 - iii. Owners and successors in title shall provide a satisfactory form of surety, either through escrow account, bond or otherwise, to cover the cost of removal and restoration of the landscape, in an amount determined to be reasonable by the Planning Board, but in no event to exceed more than 125 percent of the cost of removal. Such surety may be waived for municipally or state owned facilities. The form of surety shall be subject to review and approval of Town Counsel.
 - iv. A stormwater management report prepared by a professional engineer.
 - v. A native flowering planting and maintenance plan that supports pollinator habitat within the project area and its perimeter. Plan to be developing in consistency with UMASS Clean Energy’s Extension Pollinator Friendly Solar PV Guide.

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Commented [A1]: Below, a small scale system shall not exceed 80 kWh but there is no rating associated with a battery energy storage facility. Is the intent anything greater than 80kWh is a battery energy storage facility? You may want to further define the rating of the larger facility.

I also recommend adding language requiring the facility to comply with State’s electrical code (527 CMR. 12.00) and the State’s Fire Code (527 CMR 1.00) either here or in the SP criteria below.

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(b) Special Permit Standards

- i. Adequate access and parking shall be provided for service and emergency vehicles; however there shall be no exterior long term storage of equipment or service vehicles on the site.
- ii. For every mature tree cleared for construction, measured in board feet of wood; at least an equivalent mass of living mature trees shall be retained on-site.
- iii. An 8 foot security fence shall be installed no closer to a property line than the setback required for a principal building. In addition, the site and its fencing shall be screened by buffering vegetation from general view from the surrounding ground level unless the Planning Board determines that there is no public benefit from such screening.
- iv. The facility shall provide a vegetated buffer strip of at least 100 feet from any street line property boundaries or from the property line of any abutting residential use.
- v. To the extent feasible, all network interconnections and power lines, to and from the facility, shall be via underground lines.
- vi. Drainage from impervious surfaces shall be fully accommodated onsite.
- vii. No array shall be floodlit.
- viii. ~~Herbicides may not be used to control vegetation at the solar electric installation facility. The operator shall conduct annual monitoring of the pollinator plantings and will remove invasive species and replant native flowering plants as needed.~~
- ix. The owner of the facility must provide for and post a 24 hour emergency contact phone number and identification of the owner. The information shall remain current and shall also be provided to the Police Chief and Fire Chief.
- x. Decommissioning Requirements. Any facility which has reached the end of its useful life or has been abandoned shall be decommissioned by the owner or operator who shall notify the Board by certified mail of the proposed date of shut down and removal. Decommissioning shall consist of the following:
 - Physical removal of all panels, structures, equipment, security barriers and transmission lines from the site ~~within 180 days following the date of notice to the Board.~~
 - Disposal of all solid and hazardous waste in accordance with local, state, and federal waste disposal regulations.
 - Stabilization and re-vegetation of the site and erosion prevention.
 - The Town shall have the right, upon determination of abandonment, but not the obligation, to claim the financial surety, enter the site and remove the facility in accordance with the requirements of this section.
 - All facilities, attachments, and accessory structures which have not been used for a period of ~~one (1) year~~ two (2) years shall be considered abandoned. The removal expense shall be secured with the performance guarantee.
- xi. Battery Energy Storage Facilities are encouraged to co-locate with solar energy facilities, energy, power generation stations, and electrical sub-stations. Facilities that are a primary use shall be located within a physical building that is harmonious with the adjacent architecture. Relief from this requirement may be granted for exceptional screening or the provision of publicly accessible open space or recreational amenities.
- xii. All such systems/facilities must comply with the Massachusetts Electrical Code (527 CMR 12.00) and Fire Code (527 CMR 1.00).

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Commented [A5]: Please be aware that, absent a warrant or emergency circumstances, the Town cannot enter onto the site without the consent of the owner.

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Commented [A7]: Under G.L. C. 40A, Sec. 6, non-use is typically for a period of two years or more, while abandonment can be more immediate. With a use such as this, we may not be able to discern exactly when non-use begins, so I recommend this be increased to 2 years to be consistent with the statute. If the Board suspects the use has been abandoned, consider adding a provision where the Board would provide notice to the owner/operator of such abandonment, and if facility is not removed within a certain amount of time (such as 180 days from the date of the Board's notice) or if the owner/operator fails to respond to the Board's notice, the Town shall be authorized, but not obligated, to seize the surety and take steps to remove the facility.

Commented [A8R7]: Changed to two years to remain consistent with State Law

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8.9.5 Small Scale Battery Energy Storage System

Small Scale Battery Energy Storage Systems that are ancillary to and located within a commercial, residential, or industrial permitted primary use ~~is~~ are allowed by right in all zoning districts. All such systems must comply with the Massachusetts Electrical Code (527 CMR 12.00) and Fire Code (527 CMR 1.00).

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Commented [A10]: If the intent is to allow this use by right in all zoning districts, I recommend adding "in all zoning districts" at the end of this sentence. If this is not the intent, then you should clarify in which zoning districts this is a use allowed by right.

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9.1.2 Applicability

The following activities and uses are subject to site plan review:

- (a) All uses that involve the construction or expansion or change of use of over 3,000 square feet of floor area.
- (b) All uses that involve the development of over 130,680 square feet (3 acres) of land.
- (c) Any new structure, group of new structures, changes of use, or additions which result in an increase of 500 or more vehicle trips per day, as proposed in an applicant's business plan acceptable to the reviewing authority or estimated by a professional engineer.
- (d) All uses that involve the construction or expansion of a parking area that creates ten (10) or more new parking spaces, per §7.2.6
- (e) Specific Uses identified elsewhere in this bylaw:
 - Accessory Apartments within existing single family homes, per §8.5
 - Self-storage facilities, per §8.9
 - Solar energy and battery energy storage facilities, per §8.9
 - Medical Marijuana Treatment Center or Marijuana retailer, cultivation, production, research or testing, per §8.10
 - Open Space Residential Development, per §8.11
 - Planned Unit Development, per §8.12