

APPROVED

TOR-2025-3

**AN ORDINANCE TO AMEND CHAPTER 180
OF THE CODE OF THE CITY OF AGAWAM REGARDING
BATTERY ENERGY STORAGE SYSTEMS**

(Sponsored by Christopher C. Johnson, Mayor)

WHEREAS, a battery energy storage system (BESS) is an electrochemical device that charges or collects energy and then discharges that energy at a later time to provide electricity when needed; and

WHEREAS, ten years ago the Commonwealth launched the Energy Storage Initiative (ESI) which aims to make the Commonwealth a national leader in the emerging energy storage market; and

WHEREAS, battery energy storage systems have broad flexibility with small systems available for homeowners and small businesses, distributed generative facilities that are medium in size and scale that connect to the grid, and larger utility grade grid connected BESS with much larger storage capacity; and

WHEREAS, Agawam has no zoning ordinance that deals with battery energy storage systems and given the potential for the installation of new BESS, it is important for Agawam to adopt an ordinance to regulate the installation and use of battery energy storage systems; and

WHEREAS, it is in the best interest of the City of Agawam to amend Chapter 180 by adding Article XXIII entitled "Battery Energy Storage Systems" which adds §180-164 to §180-173 to the Code of the City of Agawam to provide local guidance regarding the installation and use of BESS in Agawam; and

NOW THEREFORE, the Agawam City Council hereby amends Chapter 180 of the Code of the City of Agawam by adding Article XXIII entitled "Battery Energy Storage Systems" which is attached hereto and incorporated herein by reference.

DATED THIS 22nd DAY OF April, 2025.

PER ORDER OF THE AGAWAM CITY COUNCIL

Rosemary Sandlin
Rosemary Sandlin, President

APPROVED AS TO FORM AND LEGALITY

Christopher S. Cappucci
Christopher S. Cappucci, Solicitor

Original: Clerk
Mayor
Council
Law
Planning
Auditor
Procurement
Insp. Serv.

MAYORAL ACTION

Received this 23rd day of April, 2025 from Council Clerk.

Signed by Council President this 22nd day of April, 2025

APPROVAL OF LEGISLATION

By the powers vested in me pursuant to Article 3, Section 3-6 of the Agawam Charter, as amended, I hereby approve the passage of the above legislation on this 23rd day of April, 2025.



Christopher C. Johnson, Mayor

DISAPPROVAL OF LEGISLATION

By the powers vested in me pursuant to Article 3, Section 3-6 of the Agawam Charter, as amended, I hereby veto the passage of the above legislation on this _____ day of _____, 20__ for the following reason(s):

Christopher C. Johnson, Mayor

RETURN OF LEGISLATION TO COUNCIL CLERK

Returned to Council Clerk this 23rd day of April, 2025.

ARTICLE XXIII Battery Energy Storage Systems

§180-164 Purpose.

The purpose of this Article is to promote the reasonable regulation of the installation and use of battery energy storage systems, with the following objectives: (i) to provide a regulatory scheme for the location, construction and operation of battery energy storage systems consistent with best practices and safety protocols; (ii) to ensure compatible land uses in the vicinity of the areas affected by battery energy storage systems and to mitigate any potential impacts on abutting and nearby properties; and (iii) to mitigate the impacts of battery energy storage systems on environmental resources such as agricultural lands, forests, wildlife, wetlands and other natural resources.

This Article shall be construed to be consistent with state law, including but not limited to the provisions of Massachusetts General Laws Chapter 40A, Section 3, and state regulations, including but not limited to the provisions of the State Building Code, State Fire Code and State Electrical Code. In the event of any conflict between the provisions of this section and the provisions of state law or regulations, the state law and regulations shall prevail.

§180-165 Definitions.

As used in this Article, the following terms shall have the meanings indicated. Terms that are not defined herein or elsewhere in this Article shall be as defined by the National Fire Protection Association (NFPA), if applicable.

ANSI: American National Standards Institute.

Battery or batteries: A single cell or a group of cells connected together electrically in series, in parallel, or a combination of both, which can charge, discharge, and store energy electrochemically. For the purposes of this Article, batteries utilized in consumer products are excluded from these requirements.

Battery Energy Storage System (BESS): Electrochemical devices that charge, or collect, energy from the grid or a generation facility, store that energy, and then discharge that energy at a later time to provide electricity or other grid services.

BESS Management System: An electronic system that protects energy storage systems from operating outside their safe operating parameters and disconnects electrical power to the energy storage system or places it in a safe condition if potentially hazardous temperatures or other conditions are detected.

Cell: The basic electrochemical unit, characterized by an anode and a cathode, used to receive, store and deliver electrical energy.

Commissioning: A systematic process that provides documented confirmation that a battery energy storage system functions according to the intended design criteria and complies with applicable code requirements.

Dedicated-Use Building: A building that is built for the primary intention of housing battery energy storage system equipment, and complies with the following:

1. The building's only use is battery energy storage, energy generation, and other electrical grid related operations.
2. No other occupancy types are permitted in the building.
3. Occupants in the rooms and areas containing battery energy storage systems are limited to personnel that operate, maintain, service, test and repair the battery energy storage system and other energy systems.
4. Administrative and support personnel are permitted in areas within the buildings that do not contain battery energy storage systems, provided the following:
 - a. The areas do not occupy more than 10 percent of the building area of the story in which they are located.
 - b. A means of egress is provided from the administrative and support use areas to the public way that does not require occupants to traverse through areas containing battery energy storage systems or other energy system equipment.

NFPA: National Fire Protection Association.

This Article: Article XXIII of the Code of the Town of Agawam.

UL: Underwriters Laboratory

§180-166 Applicability.

1. The requirements of this Article shall apply to battery energy storage systems permitted by site plan review, special permit or building permit, installed, decommissioned or modified after the effective date of this Article.
2. Battery energy storage systems that are paired with a building integrated solar energy system are allowable as an accessory use in all zoning districts, provided they comply with the provisions of §180-167 hereof.
2. Battery energy storage systems that are subject to this Article shall be classified as either a Tier 1, Tier 2 or Tier 3 Battery Energy Storage System as follows:
 - a. Tier 1 Battery Energy Storage Systems have an aggregate energy capacity less than or equal to 500 KWh.
 - b. Tier 2 Battery Energy Storage Systems have an aggregate energy capacity greater than 500 KWh and less than or equal to 50 MWh.
 - c. Tier 3 Battery Energy Storage Systems have an aggregate energy capacity greater than 50MWh.

§180-167 General Requirements.

1. All permits required by state codes, including but not limited to building permit, an electrical permit, and a fire department permit shall be required for installation of all battery energy storage systems.
2. All battery energy storage systems, all Dedicated Use Buildings, and all other buildings or structures that (a) contain or are otherwise associated with a battery energy storage system; and (b) are subject to the requirements of the State Building Code, shall be designed, erected, and installed in accordance with all applicable provisions of the State Building Code, the State Fire Code, and the State Electrical Code. All battery energy storage systems shall comply with the NFPA Standard for the Installation of Stationary Energy Storage Systems, as amended from time to time.
3. Energy storage system capacities, including array capacity and separation, are limited to the thresholds contained in the NFPA Standard for the Installation of Stationary Energy Storage Systems, as amended from time to time.
4. Any battery energy storage system constructed in the Floodplain District as set forth in §180-68 shall require a special permit granted pursuant to §180-71.
5. Any application to construct a Tier 2 or Tier 3 battery energy storage system where the energy storage units are located within two hundred fifty (250) feet of a sensitive noise receptor may be required to include an acoustic study in order to ensure that any increase in sound complies with Massachusetts DEP requirements.

§180-168 Permitting Requirements for Tier 1 Battery Energy Storage Systems.

Tier 1 Battery Energy Storage Systems are allowed by right in all zoning districts, subject to applicable provisions of the State Building Code, the State Electrical Code, the State Fire Code, and other applicable codes, and such provisions of this Article as are applicable.

§180-169 Permitting Requirements for Tier 2 and Tier 3 Battery Energy Storage Systems.

Tier 2 and Tier 3 Battery Energy Storage Systems are allowed by right in any Industrial zone subject to applicable provisions of the State Building Code, the State Electrical Code, the State Fire Code, and other applicable codes, and subject to site plan review as outlined in §180-13 of the Code of the Town of Agawam and such provisions of this Article as are applicable. Tier 2 Battery Energy Storage Systems are allowed by right in the Agricultural zone subject to applicable provisions of the State Building Code, the State Electrical Code, the State Fire Code, and other applicable codes, and subject to site plan review as outlined in §180-13 of the Code of the Town of Agawam and such provisions of this Article as are applicable. Tier 3 Battery Energy Storage Systems are allowed in the Agricultural zone subject to the issuance of a special permit as outlined in §180-11 of the Code of the Town of Agawam and subject to applicable provisions of the State Building Code, the State Electrical Code, the State Fire Code, and other applicable codes, and subject to site plan review as outlined in §180-13 of the Code of the Town of Agawam and such

provisions of this Article as are applicable. No Tier 2 or Tier 3 Battery Energy Storage System shall be constructed or installed in any Residential or Business zone, except for access or utility interconnection. Tier 1, Tier 2 and Tier 3 BESS shall comply with the applicable requirements set forth in this Article, as well as the Code of the Town of Agawam. The following requirements apply to all BESS subject to this Article, except where it is specifically noted to apply only to Tier 2 or Tier 3 BESS:

1. **Utility Lines and Electrical Circuitry.** All on-site utility lines shall be placed underground to the extent feasible and as permitted by the serving utility, with the exception of the main service connection at the utility company right-of-way and any new interconnection equipment, including without limitation any poles.
2. **Signage.** Signage shall comply with the requirements of Article XIII of Chapter 180 of the Code of the Town of Agawam and the following additional requirements; in the event of a conflict between the provisions of Article XIII and this Section, the requirements of this Section shall prevail.
 - a) The signage shall be in compliance with ANSI requirements and shall include the type of technology associated with the battery energy storage systems, any special hazards associated, the type of suppression system installed in the area of battery energy storage systems, and twenty-four (24) hour emergency contact information, including reach-back phone number.
 - b) As required by the state electrical code, disconnect and other emergency shutoff information shall be clearly displayed on a light reflective surface. A clearly visible warning sign concerning voltage shall be placed at the base of all pad-mounted transformers and substations.
 - c) Signage compliant with ANSI requirements shall be provided on doors to rooms, entrances to BESS facilities, and on BESS outdoor containers.
3. **Lighting.** Lighting systems shall be consistent with local, state and federal law. 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.
4. **Vegetation and tree-cutting.** Areas within ten (10) feet on each side of Battery Energy Storage Systems shall be cleared of combustible vegetation and other combustible growth. Single specimens of trees, shrubbery, or cultivated ground cover such as green grass, ivy, succulents, or similar plants used as ground covers shall be permitted provided that they do not form a means of readily transmitting fire. Removal of trees should be minimized to the extent possible.
6. **Setbacks.** Tier 2 Battery Energy Storage Systems shall be set back a minimum of fifty (50) feet from all side, rear, and front lot lines; Tier 3 BESS shall be set back a minimum of one hundred (100) feet from side, rear, and front lot lines that abut or are across a street from residential zoning districts or existing single, two-family,

or multi-family structures. The minimum setback areas shall include a buffer area at least fifteen (15) feet wide along all property lines. Access drives and parking are allowed in the setback areas, but shall not intrude into the required buffer areas except where necessary to provide access or egress to the property. In addition, a minimum of ten (10) feet must be maintained between BESS components and all buildings, stored combustible materials, hazardous materials, high-piled storage, personnel means of egress, and other exposure hazards not associated with electrical grid infrastructure.

7. **Dimensional.** Tier 2 and Tier 3 Battery Energy Storage Systems shall comply with the dimensional limitations for principal structures of the underlying zoning district as provided in Table of Dimension Regulations (See 180 Attachment 4, Appendix B to Chapter 180 of the Code of the Town of Agawam, unless otherwise provided in this Article).
8. **Fencing Requirements.** Battery Energy Storage Systems, including all mechanical equipment, shall be enclosed by a minimum eight (8) foot high fence with a self-locking gate to prevent unauthorized access unless housed in a dedicated-use building. Said fence may be placed within any minimum setback area. Security barriers, fences, landscaping and other enclosures must not inhibit required air flow to or exhaust from the BESS and components. The NFPA Standard for the Installation of Stationary Energy Storage Systems, as amended from time to time, requires specialty safety systems to be provided based on the BESS chemistry and installed location.
9. **Screening and Visibility.** Battery Energy Storage Systems shall have views minimized from adjacent properties to the extent reasonably practicable using architectural features, earth berms, landscaping or other screening methods that will harmonize with the character of the property and surrounding area. Such features may not inhibit required air flow to or exhaust from the BESS and components and must comply with the setbacks established in paragraph 6 above.
10. **Batteries.** Failed battery cells and modules shall not be stored on the site and shall be removed no later than thirty (30) days after deemed failed by the BESS operator or cell/module manufacturer. The operator shall notify the Agawam Fire Chief in advance if the type of battery or batteries used onsite is to be changed.
11. **Decommissioning Plan.** The applicant for Tier 2 and Tier 3 BESS shall submit with its application a decommissioning plan for the BESS to be implemented upon abandonment and/or in conjunction with removal of the facility. The owner or operator of the BESS shall notify the Building Commissioner in writing at least twenty (20) days prior to when a BESS will be decommissioned. Decommissioning of an abandoned or discontinued BESS shall be completed within six (6) months after the facility ceases operation. The decommissioning plan shall include:

- a. A narrative description of the activities to be accomplished, including who will perform that activity and at what point in time, for complete physical removal of all battery energy storage system components, structures, equipment, security barriers, and transmission lines from the site;
 - b. Disposal of all solid and hazardous waste in accordance with local, state, and federal waste disposal regulations;
 - c. The anticipated life of the battery energy storage system;
 - d. The estimated decommissioning costs and how said estimate was determined;
 - e. The method of ensuring that funds will be available for decommissioning and restoration;
 - f. The method by which the decommissioning cost will be kept current;
 - g. The manner in which the site will be restored, including a description of how any changes to the surrounding areas and other systems adjacent to the battery energy storage system, such as, but not limited to, structural elements, building penetrations, means of egress, and required fire detection suppression systems, will be protected during decommissioning and confirmed as being acceptable after the system is removed; and
 - h. A listing of any contingencies for removing an intact operational energy storage system from service, and for removing an energy storage system from service that has been damaged by a fire or other event.
12. **Decommissioning Bond.** The owner and/or operator of a Tier 2 or Tier 3 BESS shall continuously maintain a bond or other surety acceptable to the Town, in a form approved by the Mayor, for the removal of the battery energy storage system, in an amount to be determined by the Town, for the period of the life of the facility. All costs of the financial security shall be borne by the applicant.
 13. **Proof of Liability Insurance.** The applicant for a Tier 2 or Tier 3 BESS or the property owner shall provide evidence of commercially liability insurance in an amount and type generally acceptable in the industry and approved by the Mayor prior to the issuance of a building permit, and shall continue such insurance in effect until such facility has been decommissioned, removed and the site restored in accordance with this Article.

§180-170 Site plan application.

For Tier 2 and Tier 3 Battery Energy Storage Systems, the site plan application shall include the following information, in addition to that required by §180-13 of the Code of the Town of Agawam:

1. A one-line or three-line electrical diagram detailing the battery energy storage system layout, associated components, and electrical interconnection methods, with all state electrical code compliant disconnects and over current devices.
2. A preliminary equipment specification sheet that documents the proposed battery energy storage system components, inverters and associated electrical equipment that are to be installed. A final equipment specification sheet shall be submitted prior to the issuance of building permit.
3. Name, address, and contact information of proposed or potential system installer and the owner and/or operator of the battery energy storage system. Such information of the final system installer shall be submitted prior to the issuance of building permit.
4. Large-scale fire test data, evaluation information, and calculations, and modeling data. For any of the following, UL fire test data must be made available to the Town for review: BESS systems with a capacity of greater than 50kWh - BESS systems with spacing between arrays of less than three (3) feet.
5. Commissioning Plan. The system installer or commissioning agent shall prepare a commissioning plan prior to the start of commissioning. Such plan shall be compliant with the NFPA Standard for the Installation of Stationary Energy Storage Systems, as amended from time to time, and document and verify that the system and its associated controls and safety systems are in proper working condition per requirements set forth in applicable state codes. Where commissioning is required by the building code, battery energy storage system commissioning shall be conducted by a Massachusetts Licensed Professional Engineer after the installation is complete but prior to final inspection and approval. A corrective action plan shall be developed for any open or continuing issues that are allowed to be continued after commissioning. A report describing the results of the system commissioning and including the results of the initial acceptance testing required by applicable state codes shall be provided to Zoning Enforcement Officer prior to final inspection and approval and maintained at an approved on-site location.
6. Fire Safety Compliance Plan. Such plan shall document and verify that the system and its associated controls and safety systems are in compliance with state codes, including documentation that BESS components comply with the safety standards set forth in §180-172.
7. Operation and Maintenance Manual. Such plan shall describe continuing battery energy storage system maintenance and property upkeep, as well as design, construction, installation, testing and commissioning information and shall meet all requirements set forth state codes and the NFPA Standard for the Installation of Stationary Energy Storage Systems, as amended from time to time. Maintenance provisions will be driven by manufacturer requirements for the specific listed system.

8. Depending on the location of the BESS in relation to and its interaction with the electrical grid, interconnection will be completed per the State Electrical Code. System interconnections into utility grids shall be in accordance with the NFPA Standard for the Installation of Stationary Energy Storage Systems, as amended from time to time. An accessible disconnect is required per the State Electrical Code.
9. Prior to the issuance of the building permit, engineering documents must be signed and sealed by a Massachusetts Licensed Professional Engineer.
10. **Emergency Operations Plan.** An Emergency Operations Plan compliant with the NFPA Standard for the Installation of Stationary Energy Storage Systems, as amended from time to time, is required. A copy of the approved Emergency Operations Plan shall be given to the system owner, the local fire department, and local fire code official. For so long as the BESS is operational, the operator shall provide the Fire Department, Police Department, Building Commissioner, and Mayor's office with contact information for personnel that can be reached twenty-four (24) hours per day every day, and this contact information shall be updated by the operator whenever there is a change in the information. The operator shall also be required to have an official representative be present onsite not later than two hours after notification by the Fire Chief, Police Chief, or their designee. A permanent copy shall also be placed in an approved location to be accessible to facility personnel, fire code officials, and emergency responders. The emergency operations plan shall include the following information:
 - a. Procedures for safe shutdown, de-energizing, or isolation of equipment and systems under emergency conditions to reduce the risk of fire, electric shock, and personal injuries, and for safe start-up following cessation of emergency conditions.
 - b. Procedures for inspection and testing of associated alarms, interlocks, and controls, including time intervals for inspection and testing.
 - c. Procedures to be followed in response to notifications from the Battery Energy Storage Management System, when provided, that could signify potentially dangerous conditions, including shutting down equipment, summoning service and repair personnel, and providing agreed upon notification to fire department personnel for potentially hazardous conditions in the event of a system failure.
 - d. Emergency procedures to be followed in case of fire, explosion, release of liquids or vapors, damage to critical moving parts, or other potentially dangerous conditions. Procedures can include sounding the alarm, notifying the fire department, evacuating personnel, de-energizing equipment, and controlling and extinguishing the fire.

- e. Response considerations similar to a safety data sheet (SDS) that will address response safety concerns and extinguishment when an SDS is not required.
- f. Procedures for safe disposal of battery energy storage system equipment damaged in a fire or other emergency event, including maintaining contact information for personnel qualified to safely remove damaged battery energy storage system equipment from the facility.
- g. Other procedures as determined necessary by the Town to provide for the safety of occupants, neighboring properties, and emergency responders.
- h. Procedures and schedules for conducting drills of these procedures and for training local first responders on the contents of the plan and appropriate response procedures.

§180-171 Ownership Changes.

If the owner of a Tier 2 or Tier 3 battery energy storage system changes or the owner of the property changes, the site plan approval and special permit shall remain in effect, provided that the successor owner or operator assumes in writing all of the obligations of the special permit, site plan approval, and decommissioning plan. A new owner or operator of the battery energy storage system shall notify the Building Commissioner and the Mayor of such change in ownership or operator within fourteen (14) days of the ownership change. A new owner or operator must provide such notification to the Building Commissioner and the Mayor in writing.

§180-172 Safety.

- 1. System Certification. Battery energy storage systems and equipment shall be certified by a Nationally Recognized Testing Laboratory to UL standards for battery energy storage systems and equipment or approved equivalent, with subcomponents meeting each of the following standards as applicable:
 - a. UL standards for batteries for use in stationary, vehicle auxiliary power and light electric rail applications;
 - b. UL standard for lithium batteries;
 - c. UL standards for inverters and power converters;
 - d. certified under the applicable electrical, building, and fire prevention codes as required; and
 - e. alternatively, field evaluation by an approved testing laboratory for compliance with UL (or approved equivalent) and applicable codes, regulations and safety standards may be used to meet system certification requirements.

2. **Site Access.** Battery energy storage systems shall be maintained in good working order and in accordance with industry standards. Site access shall be maintained, including snow removal at a level acceptable to the local fire department.
3. Battery energy storage systems, components, and associated ancillary equipment shall have required working space clearances, and electrical circuitry shall be within weatherproof enclosures marked with the environmental rating suitable for the type of exposure in compliance with the NFPA Standard for the Installation of Stationary Energy Storage Systems, as amended from time to time.

§180-173 Abandonment.

The battery energy storage system shall be considered abandoned when it ceases to operate consistently for more than one (1) year. If the owner and/or operator fails to comply with decommissioning upon any abandonment, the Town of Agawam may, after compliance with any applicable state and federal constitutional requirements, enter the property and utilize the available bond and/or security for the removal of a BESS and restoration of the site in accordance with the decommissioning plan.