

Article XI. — Battery Energy Storage Systems and Equipment

**§ 98-47 Statement of Purpose.**

Statement of Purpose. These regulations are adopted to advance and protect the public health, safety, welfare, and quality of life of the Town of Chester by creating regulations for the installation and use of battery energy storage systems and equipment, with the following objectives:

- A. To provide a regulatory scheme for the designation of properties suitable for the location, construction and operation of battery energy storage systems;
- B. To ensure compatible land uses in the vicinity of the areas affected by battery energy storage systems;
- C. To mitigate the impacts of battery energy storage systems on environmental resources such as forests, wildlife, and other protected resources; and
- D. To create synergy between battery energy storage system development and the Goals and Objectives of the Town’s Comprehensive Plan, which call to “maintain and upgrade utilities to create infrastructure that is sustainable for current and future Town residents” and “review and update its Zoning chapter to ensure, where appropriate, that these types of utilities can be used and installed on residential and commercial buildings and properties.”

**§ 98-48 Definitions.**

As used in this Article, the follow terms shall have the meanings as set forth herein. All other terms shall have the meanings as set forth in § 98-2 of this Chapter.

**ANSI:** American National Standards Institute

**BATTERY(IES):** 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 law, batteries utilized in consumer products are excluded from these requirements.

**BATTERY ENERGY STORAGE 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.

**BATTERY ENERGY STORAGE SYSTEM (BESS):** One or more devices, assembled together, capable of storing energy in order to supply electrical energy at a future time, not to include a stand-alone 12-volt car battery or an electric motor vehicle For purposes of this code, a BESS shall exclusively

encompass the mechanical and electrical components integral to energy storage and conversion, including but not limited to batteries, inverters, power conditioning systems, control systems, and protective enclosures. This definition specifically excludes civil improvements such as roads, access drives, parking areas, stormwater management and fencing. A battery energy storage system is classified as a Tier 1 or Tier 2 Battery Energy Storage System as follows:

- A. Tier 1 Battery Energy Storage Systems have an aggregate energy capacity less than or equal to 600kWh and, if in a room or enclosed area, consist of only a single energy storage system technology.
- B. Tier 2 Battery Energy Storage Systems have an aggregate energy capacity greater than 600kWh or are comprised of more than one storage battery technology in a room or enclosed area.

**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, is classified as Group F-1 occupancy as defined in the International Building Code, as may be amended from time to time, and complies with the following:

- A. The building's only use is battery energy storage, energy generation, and other electrical grid-related operations.
- B. No other occupancy types are permitted in the building.
- C. 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.
- D. Administrative and support personnel are permitted in areas within the buildings that do not contain a battery energy storage system, provided the following:
  - (1) The areas do not occupy more than 10 percent of the building area of the story in which they are located.
  - (2) 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.

**ENERGY CODE:** The New York State Energy Conservation Construction Code adopted pursuant to Article 11 of the Energy Law, as currently in effect and as hereafter amended from time to time.

**FIRE CODE:** The fire code section of the New York State Uniform Fire Prevention and Building Code adopted pursuant to Article 18 of the Executive Law, as currently in effect and as hereafter amended from time to time.

**NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL):** A U.S. Department of Labor designation recognizing a private sector organization to perform certification for certain products to ensure that they meet the requirements of both the construction and general industry OSHA electrical standards.

**NEC:** National Electric Code.

**NFPA:** National Fire Protection Association.

**NON-DEDICATED-USE BUILDING:** All buildings that contain a battery energy storage system and do not comply with the dedicated-use building requirements.

**NON-PARTICIPATING PROPERTY:** Any property that is not a participating property.

**NON-PARTICIPATING RESIDENCE:** Any residence located on non-participating property.

**OCCUPIED STRUCTURE:** Any building in Occupancy Group A, B, C, D, E, F, I, R, as defined in the International Building Code, as may be amended from time to time, including but not limited to residential dwellings (single or multi-family), schools, offices, colleges, industrial uses, retail, daycare facilities, hospitals, correctional facilities, public libraries, theaters, stadiums, hotels, and houses of worship.

**PARTICIPATING PROPERTY:** A battery energy storage system host property or any real property that is the subject of an agreement that provides for the payment of monetary compensation to the landowner from the battery energy storage system owner (or affiliate) regardless of whether any part of a battery energy storage system is constructed on the property.

**UNIFORM CODE:** the New York State Uniform Fire Prevention and Building

Code adopted pursuant to Article 18 of the Executive Law, as currently in effect and as hereafter amended from time to time.

**§ 98-49 Applicability.**

- A. The requirements of this Article shall apply to all battery energy storage systems permitted, installed, or modified in the Town of Chester after the effective date of this Article, excluding general maintenance and repair.
- B. Battery energy storage systems that have a valid building permit or have been constructed or installed prior to the effective date of this Article shall not be required to meet the requirements of this Article, except as set forth in subsection C below.
- C. Modifications to, retrofits or replacements of an existing battery energy storage system that increase the total battery energy storage system designed discharge duration or power rating shall be subject to this Article.

**§ 98-50 General Requirements**

- A. A building permit and an electrical permit shall be required for the installation of all battery energy storage systems.
- B. Issuance of permits and approvals by the [Town Planning Board](#) shall include review pursuant to the State Environmental Quality Review Act.
- C. All battery energy storage systems, all Dedicated Use Buildings, and all other buildings or structures that (1) contain or are otherwise associated with a battery energy storage system and (2) subject to the Uniform Code and/or the Energy Code shall be designed, erected, and installed in accordance with all applicable provisions of the Uniform Code, all applicable provisions of the Energy Code, and all applicable provisions of the codes, regulations, and industry standards as referenced in the Uniform Code, the Energy Code, and the Town of Chester Code.

**§ 98-51 Requirements for Tier 1 Battery Energy Storage Systems.**

Tier 1 Battery Energy Storage Systems shall be permitted in all zoning districts, as an accessory use subject to the Uniform Code and “Battery Energy Storage System Permit.” Tier 1 Battery Energy Storage Systems are exempt from site plan review and are Type II actions under the State Environmental Quality Review Act (SEQR).

- A. Tier 1 Battery Energy Storage Systems for one or two-family residential dwelling units shall not exceed an aggregate energy capacity of the following:
  - (1) Forty (40) kWh within utility closets and storage or utility spaces;

(2) Eighty (80) kWh in attached or detached garages and detached accessory structures;

(3) Eighty (80) kWh on exterior walls; or

(4) Eighty (80) kWh outdoors on the ground.

- B. All outdoor Tier 1 Battery Energy Storage Systems shall only be installed within a side or rear yards and meet the minimum lot size and standard setbacks in the zoning district for principal structures. Heights are limited to 6.5 ft for any external battery energy storage systems.
- C. All outdoor Tier 1 Battery Energy Storage Systems shall provide a Fire Safety Compliance Plan. Such plan shall document and verify that the system and its associated controls and safety systems are in compliance with the Uniform Code.
- D. All outdoor Tier 1 Battery Energy Storage Systems shall not have an area greater than 225 square feet for a single energy storage system, and all systems in the aggregate shall not occupy more than 25% of the area of the required rear or side yard.

#### **§ 98-52 Requirements for Tier 2 Battery Energy Storage Systems**

Tier 2 Battery Energy Storage Systems are permitted through site plan review by the Planning Board and Special Use Permit review by the [Town Planning Board](#), and pursuant to § 98, Table 1, Table of District Use Regulations, § 98-30 Site Plan Review and § 98-31 Special Use Permits. In addition to those applicable sections, Tier 2 Battery Energy Storage Systems shall adhere to the standards and requirements set forth below:

- A. Application completeness. An application shall be considered complete when it addresses all matters listed in these regulations including, but not necessarily limited to, (i) compliance with all applicable provisions of the Uniform Code and all applicable provisions of the Energy Code and (ii) matters relating to the proposed battery energy storage system and Floodplain, Utility Lines and Electrical Circuitry, Signage, Lighting, Vegetation and Tree-cutting, Noise, Decommissioning, Site Plan and Development, Special Use and Development, Ownership Changes, Safety, and Permit Time Frame and Abandonment. Applicants shall be advised within ten business days of the completeness of their application or any deficiencies that must be addressed prior to substantive review.

#### **§ 98-53 Standards.**

- A. 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, with new easements and right-of-way.

B. Signage.

(1) Signage shall adhere to the requirements of §98-21.

(2) The signage shall be in compliance with ANSI Z535 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 24-hour emergency contact information, including reach-back phone number.

(3) As required by the NEC, 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. Lighting. Lighting of the battery energy storage systems shall be limited to that minimally required for safety and operational purposes and shall be reasonably shielded and downcast from abutting properties.

D. Trees and Vegetation. The clearing of vegetation shall be limited to that which is necessary for the construction, operation, and maintenance of the Tier 2 Battery Energy Storage System.

(1) Areas within ten feet on each side of Tier 2 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 to be exempt provided that they do not form a means of readily transmitting fire.

(2) Removal of trees should be minimized to the greatest extent possible.

(3) Battery Energy Storage Systems shall not be sited within any required buffer areas.

E. Noise. The noise generated from the battery energy storage systems, components, and associated ancillary equipment shall meet the requirements of Chapter 63, Noise Pollution Control. Applicants to submit equipment and component manufacturers noise ratings to demonstrate compliance. The applicant may be required to provide operating sound pressure level measurements from a reasonable number of sampled locations at the perimeter of the battery energy storage system to demonstrate compliance with this standard.

**§ 98-54 Decommissioning.**

- A. Decommissioning Plan. The applicant shall submit a decommissioning plan, developed in accordance with the Uniform Code, to be implemented upon abandonment and/or in conjunction with removal from the facility. The decommissioning plan shall include:
- (1) 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;
  - (2) Disposal of all solid and hazardous waste in accordance with local, state, and federal waste disposal regulations;
  - (3) The anticipated life of the battery energy storage system;
  - (4) The estimated decommissioning costs and how said estimate was determined;
  - (5) The method of ensuring that funds will be available for decommissioning and restoration;
  - (6) The method by which the decommissioning cost will be kept current;
  - (7) 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
  - (8) 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.
- B. Decommissioning Fund. The owner and/or operator of the energy storage system, shall continuously maintain a fund or bond payable acceptable by the Town Attorney and in an amount approved by the [Town-Planning Board](#), for the removal of the battery energy storage system for the period of the life of the facility. This fund may consist of a letter of credit from a State of New York licensed-financial institution. All costs of the financial security shall be borne by the applicant.
- C. Upon cessation of electricity generation of a battery energy storage system on a continuous basis for 12 months, the Town may notify and instruct the owner and/or operator of the energy storage system to implement the decommissioning plan. The decommissioning plan must be completed within 12 months of notification.
- D. If the owner and/or operator fails to comply with decommissioning upon any

abandonment, the Town may, at its discretion, utilize the bond and/or security for the removal of the energy storage system and restoration of the site in accordance with the decommissioning plan.

**§ 98-55 Site Plan Application.**

A Tier 2 Battery Energy Storage System is permitted through site plan review by the Planning Board and Special Use Permit review by the [Town Planning Board](#), and pursuant to § 98-30 Site Plan, § 98-31 Special Permit, and § 98, Attachment 2 Schedules of Use and Area Requirements. In addition to those applicable sections, Tier 2 Battery Storage System site plan application shall include the following:

- A. A one- or three-line electrical diagram detailing the battery energy storage system layout, associated components, and electrical interconnection methods, with all National Electrical Code compliant disconnects and over current devices.
- B. Preliminary equipment specification sheets that document the proposed battery energy storage system components, inverters and associated electrical equipment that are to be installed. Final equipment specification sheets shall be submitted prior to the issuance of building permit.
- C. 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.
- D. Name, address, phone number, and signature of the project Applicant, as well as all the property owners, demonstrating their consent to the application and the use of the property for the battery energy storage system.
- E. Commissioning Plan. Such plan shall document and verify that the system and its associated controls and safety systems are in proper working condition per requirements set forth in the Uniform Code. Where commissioning is required by the Uniform Code, battery energy storage system commissioning shall be conducted by a New York State (NYS) Licensed Professional Engineer after the installation is complete but prior to final inspection and Certificate of Occupancy. A corrective action plan shall be developed for any open or continuing issues that are allowed to be corrected after commissioning. A report describing the results of the system commissioning and including the results of the initial acceptance testing required in the Uniform Code shall be provided to the Code Enforcement Officer prior to final inspection and approval and maintained at an approved on-site location.

- F. Fire Safety Compliance Plan. Such plan shall document and verify that the system and its associated controls and safety systems are in compliance with the Uniform Code.
- G. 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 in the Uniform Code.
- H. Erosion and sediment control and stormwater management plans prepared to New York State Department of Environmental Conservation standards, if applicable, and to such standards as may be established by the Planning Board.
- I. Prior to the issuance of the building permit, but not required as part of the application, engineering documents must be signed and sealed by a NYS Licensed Professional Engineer.
- J. Emergency Operations Plan. A copy of the approved Emergency Operations Plan shall be given to the system owner, the local fire department, and local fire code official. 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:
  - (1) 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.
  - (2) Procedures for inspection and testing of associated alarms, interlocks, and controls.
  - (3) 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.
  - (4) 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.

- (5) Response considerations similar to a safety data sheet (SDS) that will address response safety concerns and extinguishment when an SDS is not required.
- (6) Procedures for dealing with 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.
- (7) Other procedures as determined necessary by the Town of Chester to provide for the safety of occupants, neighboring properties, and emergency responders.
- (8) 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

**§ 98-56 Special Use Permit Standards.**

The Special Use Permit shall be in compliance with the following standards in addition to those listed in § 98-31, Special Use Permits.

A. Area and Bulk Standards for Tier 2 Battery Energy Storage Systems.

- (1) Minimum Lot Size for Large Scale Solar Energy systems shall be four acres.
- (2) Minimum front, rear, and side yard setbacks shall be as follows:
  - a. Occupied Structure Setback: A minimum setback of 400 feet shall be maintained from the nearest wall of any occupied structure on an adjacent parcel not participating in the BESS project. This setback shall be measured from the closest point of the BESS equipment (from the outer edge of equipment including battery containers, inverters, and transformers) to the nearest foundation wall of the non-participating occupied principal structure at the time of application.
  - b. Dimensional Requirements. Setbacks shall be measured from the property lines of the parcel on which the BESS is located. The following dimensional requirements shall apply to a utility-scale solar energy system:

<b>Standard</b>	<b>Requirement</b>
Lot Width	100 feet
Front Yard Setback	
Town Highway	100 feet
Country Highway	125 feet
State Highway	150 feet
Side Yard Setback Total	100 feet
Side Yard Setback Minimum	40 feet
Rear Yard Setback Total	50 feet
Building Height	35 feet
Maximum Height BESS Enclosure	15 feet
Maximum Height of Fencing	8 feet

- c. **Applicability:** In all cases, the BESS shall be located such that it complies with the greater of the two setback distances (Occupied Structure Setback or Property Line Setback) for all applicable sides of the property.
  - d. **Maximum lot coverage** shall be subject to the maximum lot coverage of the underlying zoning district set forth in Area Tables.
- B. Fencing Requirements.** Tier 2 Battery Energy Storage Systems including all mechanical equipment shall be enclosed by an 8-foot-high fence with a self-locking gate to prevent unauthorized access unless housed in a dedicated-use building and not interfering with ventilation or exhaust ports. In no case shall barbed wire or razor wire be used.
- C. Screening and Visibility.** Tier 2 Battery Energy Storage Systems shall be screened from public roadways and adjacent properties through the use of architectural features, earth berms, landscaping, fencing or other screening methods which harmonize with the character of the subject property and the surrounding area. The screening shall not, however, interfere with the normal operation, ventilation or exhaust ports, or fire safety of the storage system, and the system may need to be revised to allow for adequate screening. Screening shall be maintained for the life of the use. A covenant regarding the maintenance of any required screening shall be provided by the applicant.
- D. Coverage.** The battery energy storage system shall be included in calculating

maximum permitted building coverage for the applicable zoning district.

- E. The Planning Board ~~and Town Board~~ may retain such technical consultants as ~~either it~~ deems necessary to review and advise on application. The cost of such consultants shall be borne by the applicant.

**§ 98-57 Ownership or Operator Changes.**

If the owner of the battery energy storage system changes or the owner of the property changes, the special use permit shall remain in effect, provided that the successor owner or operator assumes, in writing, all of the obligations of the special use permit, site plan approval, and decommissioning plan. A new owner or operator of the battery energy storage system shall notify the Code Enforcement Officer in writing of such change in ownership or operator within 30 days of the ownership change. The special use permit and all other local approvals for the battery energy storage system shall become void if a new owner or operator fails to provide written notification to the Code Enforcement Officer in the required timeframe. Reinstatement of a void special use permit will be subject to the same review and approval processes for new applications under this Article.

**§ 98-58 Safety.**

- A. Battery Energy Storage Systems and Battery Energy Storage Systems Equipment shall be certified under the applicable electrical and/or building codes as required.
- B. 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 and, if the Tier 2 Battery Energy Storage System is located in an ambulance district, the local ambulance service provider.
- C. If a Battery Energy Storage System is included as part of a Solar Energy System, both uses shall meet the requirements of any applicable fire prevention and building code when in use and, when no longer used, shall be disposed of in accordance with the laws and regulations of the Town and any applicable federal, state, or county laws or regulations.
- D. Where deemed necessary by the Planning Board during site plan approval, the Applicant shall ensure emergency access to the Facility Area for local first responders by installing an emergency lock box or similar device, in a location subject to approval by the Fire District.

- E. 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 NFPA 70.

**§ 98-59 System Certification.**

Battery energy storage systems and equipment shall be listed by a Nationally Recognized Testing Laboratory to UL 9540 (Standard for battery energy storage systems and Equipment) with subcomponents meeting each of the following standards as applicable:

- A. UL 1973 (Standard for Batteries for Use in Stationary, Vehicle Auxiliary Power and Light Electric Rail Applications),
- B. UL 1642 (Standard for Lithium Batteries),
- C. UL 1741 or UL 62109 (Inverters and Power Converters),
- D. Certified under the applicable electrical, building, and fire prevention codes as required.
- E. Alternatively, field evaluation by an approved testing laboratory for compliance with UL 9540 and applicable codes, regulations and safety standards may be used to meet system certification requirements.

**§ 98-60 Permit Time Frame and Abandonment.**

The battery energy storage system shall be considered abandoned when it ceases to operate consistently for more than one year. If the owner and/or operator fails to comply with decommissioning upon any abandonment, the Town of Chester may, at its discretion, enter the property and utilize the available bond and/or security for the removal of a Tier 2 Battery Energy Storage System and restoration of the site in accordance with the decommissioning plan.

**§ 98-61 Enforcement.**

Enforcement. Any violation of this Battery Energy Storage System Law shall be subject to the same enforcement requirements, including the civil and criminal penalties, provided for in the zoning or land use regulations of the Town of Chester. See Article VI Enforcement.