

MEMORANDUM

To: Ordinance Review Committee
From: Joel Greenwood
Subject: Battery Storage Facilities
Date: January 9, 2023

The Ordinance Review Committee is asking to consider how to classify Battery Storage Facilities in the Land Use Table

After researching the topic I would recommend that they be inserted akin to the “Solar Electric Production Facility – Ground Mounted” Land Use Classification as there are lot of similarities.

I would also consider some additional special standards for this use to make sure that there is no safety or long term issues much like there are for larger scale solar arrays.

Below is some existing language to consider with some standards:

Definitions

As used in this Chapter, the following terms shall have the meanings indicated: ANSI: American National Standards Institute

BATTERY: 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: 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. 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.

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, and it complies with the following:

- 1) The building's only permitted primary use is for battery energy storage, energy generation, and other electrical grid-related operations.
- 2) 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.
- 3) No other occupancy types are permitted in the building.
- 4) Administrative and support personnel are permitted in incidental-use areas within the buildings that do not contain battery energy storage system, 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 incidental-use areas to a public way that does not require occupants to traverse through areas containing battery energy storage systems or other energy systems.

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-PARTICIPATING PROPERTY: Any property that is not a Participating Property.

NON-PARTICIPATING RESIDENCE: Any residence located on Non-participating Property.

OCCUPIED COMMUNITY BUILDING: Any building in Occupancy Group A, B, E, I, R, as defined in the International Building Code, including but not limited to schools,

colleges, daycare facilities, hospitals, correctional facilities, public libraries, theaters, stadiums, apartments, 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.

UL: Underwriters Laboratory, an accredited standards developer in the US.

5. General Requirements

A. A building permit, and an electrical permit shall be required for 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 ECL Article 8 and its implementing regulations at 6 NYCRR Part 617 (“SEQRA”).

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 Code.

D. Any structure built in accordance with this law will meet or comply with the following:

1) The Applicant of any structure shall provide, at no cost to the Town or fire department, fire department training related to potential fire issues that are site specific and could arise from the structure, which training shall be provided when requested by the fire department, but must at least be provided on an annual basis, or any updated equipment is installed;

2) If specialized equipment is needed by the fire department, the Applicant of battery energy storage structures will pay for the costs of such equipment or reimburse the applicable fire department or applicable local government office or agency for the purchase of same. If there is more than one (1) Applicant, then such Applicants shall share in the costs on a pro-rata basis in proportion to the assessed value of the properties on which the structure owned by each Applicant is located.

6. Permitting Requirements for Tier 1 Battery Energy Storage Systems

A. Tier 1 Battery Energy Storage Systems shall be permitted in all zoning districts, excluding an area in an Agricultural District with Prime Soils unless for onsite use, and shall be subject to the Uniform Code and the “Battery Energy Storage System Permit” and exempt from site plan review.

B. 1) Setbacks. Tier 1 Battery Energy Storage Systems shall comply with the setback requirements of the underlying zoning district for principal structures.

7. Permitting Requirements for Tier 2 Battery Energy Storage Systems

A. Tier 2 Battery Energy Storage Systems shall be permitted in all zoning districts, excluding an area in an Agricultural District with Prime Soils unless for onsite use, and shall be subject to the Uniform Code and from the site plan review application requirements set forth in this Section.

A. Applications for the installation of Tier 2 Battery Energy Storage System shall be:

1) reviewed by the Code Enforcement Officer for completeness. An application shall be complete when it addresses all matters listed in this Local Law including, but not necessarily limited to, (i) compliance with all applicable provisions of the Uniform Code, IFC, and all applicable provisions of the Energy Code and (ii) prior to final approval, the applicant will address 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 30 business days of the completeness of their application or any deficiencies that must be addressed prior to substantive review.

2) subject to a public hearing to hear all comments for and against the application. The Town Planning Board of the Town shall have a notice printed in a newspaper of general circulation in the Town at least 5 days in advance of such hearing. Applicants shall have delivered the notice by first class mail to adjoining landowners or landowners within 200 feet of the property at least 10 days prior to such a hearing. Proof of mailing shall be provided to the Town Planning Board at the public hearing.

3) referred to the Livingston County Planning Board pursuant to General Municipal Law § 239-m if required.

4) upon closing of the public hearing, the Town Planning Board shall take action on the application within 62 days of the public hearing, which can include approval, approval with conditions, or denial. The 62-day period may be extended upon consent by both the Town Planning Board and Applicant.

B. 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.

C. Signage.

1) The signage shall be in compliance with ANSI Z535 and shall include the type of technology associated with the battery energy storage systems, including the type of battery energy storage system, 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, and all such information must be updated with any change in the storage systems.

2) 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.

D. 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.

E. Vegetation and tree-cutting. Areas within 10 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. Removal of trees should be minimized to the extent possible.

F. Noise. The 1-hour average noise generated from the battery energy storage systems, components, and associated ancillary equipment shall not exceed a noise level of fifty (50) dBA during the day and forty-five (45) dBA during the night, measured twenty-five (25) feet from the façade of any residence or Occupied Community Building, existing or under construction at the time of the permit application. If the sound from any source from the structure exhibits a tonal prominence, then the respective noise limit shall be reduced by five (5) dBA. Applicants may submit equipment and component manufacturers noise ratings to demonstrate if any source exhibits tonal prominence as measured from the residence or Occupied Community Building. The applicant may be required to provide Operating Sound Pressure Level measurements from one or more neighboring residences, within reason to demonstrate compliance with this standard following system commissioning.

G. Decommissioning.

1) Decommissioning/Removal. All applications for a Battery Energy Storage System shall be accompanied by a Decommissioning Plan to be implemented upon abandonment and/or in conjunction with removal of the installation. Prior to removal of the Battery Energy Storage System, a permit for removal activities shall be obtained from the Code

Enforcement Officer. For all other Battery Energy Storage Systems subject to regulation under this Local Law, the Decommissioning Plan shall include the following provisions:

a. The owner, operator, or his/her successors in interest shall remove any Battery Energy Storage System, Dedicated-Use Building and all other buildings or structures related thereto which have reached the end of their useful life or have been abandoned. The owner or operator shall physically remove the installation no more than one hundred fifty (150) days after the date of discontinued operations. The owner or operator shall notify the Town Code Enforcement Officer by certified mail of the proposed date of discontinued operations and plans for removal.

b. Physical removal of all Battery Energy Storage System, Dedicated- Use Building, all other buildings or structures related thereto,, equipment, security barriers, feeders and branch circuit wiring from the site.

c. Disposal of all solid and hazardous waste in accordance with local, State, and Federal waste disposal regulations.

d. 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.

e. Absent notice of a proposed date of decommissioning and written notice of extenuating circumstances, the Battery Energy Storage System shall be considered abandoned when it fails to operate for more than one (1) year without the written consent of the Planning Board (“Abandonment”). If the owner or operator of the Battery Energy Storage System fails to remove the installation in accordance with the requirements of this section within one hundred fifty (150) days of Abandonment or the proposed date of decommissioning, the Town may enter the property and physically remove the installation.

f. Upon the decommissioning of the project and removal of all equipment, the soils at the site shall be restored to the condition and classification that existed prior to the construction of the project, or if the Town has an Agricultural and Farmland Protection Plan, that is in compliance with such Plan.

g. a. As part of the decommissioning plan, the owner or operator of a Battery Energy Storage System shall provide the Town with an irrevocable standby letter of credit or other form of security reasonably acceptable to the Town attorney, which shall be in an amount sufficient to ensure the good faith performance of the terms and conditions of the permit issued pursuant hereto and to provide for the removal and restorations of the site subsequent to removal. The amount of the letter of credit or other security shall be in the amount of one hundred percent (100%) of the cost of removal of the Battery Energy Storage System and restoration of the property, which shall be renewed every five (5) years. Delivery of the letter of credit or other security to the Town shall occur prior to the commencement of operations.

h. In the event of default upon performance of such conditions, after proper notice and expiration of any cure periods, the letter of credit or other security shall be forfeited to the Town, which shall be entitled to maintain an action thereon. The letter of credit or other security shall remain in full force and effect until restoration of the property as set forth in the decommissioning plan is completed.

i. In the event of default or abandonment of the Battery Energy Storage System, the system shall be decommissioned as set forth in this subsection (G).

2) Costs of Decommissioning/Removal. The operator of an installation and the owner of the real property on which such installation is located shall be jointly and severally liable for all costs and expenses of the Town incurred during and relating to the removal of an installation under Section

(G)(1)(e). Notwithstanding the foregoing, the Town shall first attempt to secure payment for such costs and expenses from the operator of the installation; however, in the event the Town is not made whole following reasonable attempts to collect such costs and expenses from the operator of the installation, the Town reserves all rights under the Code to pursue payment for such costs and expenses from the owner of the real property on which the installation in question is located.

H. Site plan application. For a Tier 2 Battery Energy Storage System requiring a Special Use Permit, site plan approval shall be required. Any site plan application shall include the following information:

- 1) Property lines and physical features, including roads, for the project site.
- 2) Proposed changes to the landscape of the site, grading, vegetation clearing and planting, exterior lighting, and screening vegetation or structures.
- 3) A 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.
- 4) A preliminary equipment specification sheet that documents the proposed battery energy storage system components, inverters and associated electrical equipment that are to be installed, to the extent those equipment specification sheets are available. A final equipment specification sheet shall be submitted prior to the issuance of building permit.
- 5) Name, address, and contact information of the system installer and the owner and/or operator of the battery energy storage system shall be submitted prior to the issuance of building permit.
- 6) 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.
- 7) Zoning district designation for the parcel(s) of land comprising the project site.
- 8) Commissioning Plan. Prior to issuance of the building permit, 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 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 in the Uniform Code shall be provided to the Town Planning Board prior to final inspection and approval and maintained at an approved on-site location.

9) Fire Safety Compliance Plan. Prior to issuance of the building permit, such plan shall document and verify that the system and its associated controls and safety systems are in compliance with the Uniform Code.

10) System and Property Operations and Maintenance Manual. Prior to issuance of the building permit, 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.

11) Erosion and sediment control and storm water management plans prepared to MDEP standards, if applicable, and to such standards as may be established by the Planning Board.

12) Prior to the issuance of the building permit or final approval by the Town Planning Board, but not required as part of the application, engineering documents must be signed and sealed by a NYS Licensed Professional Engineer.

13) Emergency Operation 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:

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.

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 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.
- 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.

J. Special Use Permit Standards.

- 1) Setbacks. Tier 2 Battery Energy Storage Systems shall comply with the setback requirements of the underlying zoning district for principal structures.
- 2) Height. Tier 2 Battery Energy Storage Systems shall comply with the building height limitations for principal structures of the underlying zoning district.
- 3) Fencing Requirements. Tier 2 Battery Energy Storage Systems, including all mechanical equipment, shall be enclosed by a 7-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.
- 4) Screening and Visibility. Tier 2 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 and not interfering with ventilation or exhaust ports. Additionally, all structures must have a visual design standard consistent with neighboring structures within Livingston County, including agricultural related structures, such as barns, as determined by the Town Planning Board in consultation with the Code Enforcement Officer.
- 5) Security. Buildings must be protected from vehicle impact, including but not limited to protection provided by bollards.

K. Ownership 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 zoning enforcement officer (ZEO) of such change in ownership or operator within 60 days of the ownership change. A new owner or operator must provide such notification to the ZEO in writing. The special use permit and all other local approvals for the battery energy storage system would be void if a new owner or operator fails to provide written notification to the ZEO 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 Local Law.

9. Safety

A. System Certification. Prior to commencement of operation, 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:

1) UL 1973 (Standard for Batteries for Use in Stationary, Vehicle Auxiliary Power and Light Electric Rail Applications),

2) UL 1642 (Standard for Lithium Batteries),

3) UL 1741 or UL 62109 (inverters and power converters),

4) Certified under the applicable electrical, building, and fire prevention codes as required.

5) 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.

B. 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 and, if the Tier 2 Battery Energy Storage System is located in an ambulance district, the local ambulance corps. A Knox box must be installed at the site to allow access to all structures.

C. 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.

10. Permit Time Frame and Abandonment

A. The Special Use Permit and site plan approval for a battery energy storage system shall be valid for a period of 24 months, provided that a building permit is issued for construction. In the event construction is not completed in accordance with the final site plan, as may have been amended and approved, as required by the Town Planning Board, within 24 months after issuance of the building permit, the Applicant or the Town may extend the time to complete construction for 12 months. If the owner and/or operator fails to perform substantial construction after 36 months, the approvals shall expire.

B. 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 may, at its discretion and upon thirty (30) days written notice to the operator listed on file with the Town, 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.