

We, the Selectboard of Wendell, on its own motion, do hereby place the following General Bylaw on the WARRANT FOR TOWN MEETING:

ARTICLE ____: To see if the Town will adopt the following General Bylaw regarding Battery Energy Storage Systems, for protection of the public health, safety, and welfare:

General Bylaw for the Licensing of Battery Energy Storage Systems

SECTION A. PURPOSE

This article adds a new general bylaw for the Town of Wendell dealing with the licensing of Battery Energy Storage Systems (BESS), including those powered by lithium-ion batteries, for the purpose of protecting the health, safety and welfare of residents of Wendell and its natural and built environment. According to the National Fire Protection Association (NFPA) "While these batteries can provide an effective and efficient source of power, the likelihood of them overheating, catching on fire, and even leading to explosions increases when they are damaged or improperly used, charged, or stored." The industry has been observing more field failures that resulted in fires and explosions. Lithium-ion batteries contain flammable electrolytes, which can create unique hazards when the battery cell becomes compromised and enters thermal runaway. The Massachusetts Dept. of Public Utilities has acknowledged that with these batteries "a zero-risk performance standard is unattainable." By responsibly regulating and managing the hazards associated with this energy technology, we seek to minimize the risks to the health safety and welfare of the Wendell community.

Pursuant to the Report of the Climate Forestry Committee recommendations for climate-oriented forests management guidelines, "every acre of forest lost to conversion represents a loss of stored carbon to the atmosphere as well as a loss of future carbon sequestration." This bylaw limits unnecessary forest land conversion and clear-cutting, reducing the loss of all other forest benefits, and promotes the reuse of already developed sites for battery energy storage systems. It helps keeps "forests as forests." The bylaw adds new definitions for energy storage systems and BESS. It requires no licensing for battery installations within a power rating less than 1MW. Larger applications with a power rating greater than 1 MW and no more than 10 MW would require licensing approval, based on findings that their emergency operation plan, hazard mitigation analysis, evacuation plan and other emergency response plan documents are "sufficient in content and detail to protect the public health, safety, convenience, and welfare." Projects with a power rating greater than 10 MW will not be licensed. Projects would have to meet all Wendell bylaws and regulations, the NFPA standards, state building code, and meet insurance and financial surety requirements, liability insurance, and cost of decommissioning.

Section B. DEFINITIONS

For the purposes of this general bylaw, the following definitions shall apply:

"Energy Storage System:" Technology that is capable of absorbing energy, storing it for a period of time and thereafter dispatching the energy (see M.G.L. c. 164, §1.)

“Battery Energy Storage System (BESS):” An Energy Storage System that uses rechargeable batteries, which harness reversible electrochemical processes to store electrical energy using any battery chemistry, including lithium ion, lithium iron phosphate, and many others; a BESS is a stationary installation that may receive electrical energy to be stored directly from a generating facility, or from the electrical grid, or both and may dispatch energy to the grid, or to support a residential, commercial, or industrial purpose without using the grid, or both. A Battery Energy Storage System shall include the rechargeable batteries themselves and any related equipment or structures; said equipment shall include, but is not limited to, battery modules, inverters, transformers, and wiring, switches or any other equipment needed to receive or dispatch energy, as well as equipment to support temperature, fire suppression or status monitoring and associated alarms; and said structures shall include, but are not limited to, equipment enclosures, supporting slabs or foundations, access roads, fences, gates, and structures that support storm-water management, such as culverts, dams, or catchment basins, as well as any structures that serve to mitigate noise.

“Licensing Board:” the Selectboard of Wendell shall be designated as voting members of the Licensing Board, which shall be convened for the purpose of reviewing all applications submitted for a Battery Energy Storage System License. The voting members of the Licensing Board shall act as the granting authority for Battery Energy Storage System Licenses. The voting members of the Licensing Board shall also consist of the following additional appointees: one member appointed by the Conservation Commission; one member appointed by the Board of Health; one member appointed by the Planning Board; one member appointed by the Zoning Board of Appeals; one member appointed by the Energy Committee; one member appointed by the Municipal Light Board; one member appointed from the Finance Committee. The Select Board shall designate one individual to oversee and coordinate the application review process of the Licensing Board as defined in this bylaw. The Licensing Board is empowered to approve, reject, or amend and approve any application for a Battery Energy Storage System License. Licensing approval shall require a two-thirds vote of the voting members of the Licensing Board. Decisions by the Licensing Board shall be based on the Licensing requirements contained in Section D of this bylaw, and the Licensing Findings contained in Section E of this bylaw.

Section C. BASIC REQUIREMENTS BY BESS SIZE

Inasmuch as the risks to public health, safety, and welfare increase rapidly with the size of a BESS, applications to construct and operate such systems shall be subject to increasing scrutiny according to size as follows:

1. The construction and operation of all BESS installations regardless of power rating or storage capacity shall comply with all applicable local, state, and federal requirements, including but not limited to all applicable safety, construction, electrical, and communications requirements; all such BESS shall comply with all local bylaws and regulations, including but not limited to the Town of Wendell’s Wetlands Protection Bylaw, Board of Health Regulations, and Solar Energy Bylaw. All BESS buildings and fixtures forming part thereof shall be constructed in accordance with all required building codes, including the Massachusetts State Building Code; the Wendell Building Inspector shall review all plans or designs for the installation of a BESS facility and certify that the final installation conforms to all required building codes. In addition, all

BESS shall meet the standards of the National Fire Protection Association (NFPA) for the Installation of Stationary Energy Storage Systems in effect at the time of construction.

2. In addition to the preceding requirements, any BESS with a power rating greater than 1 MW and no more than 10 MW shall require license approval by the Wendell Licensing Board as issued by said board only if the requirements of Sections D and E of this bylaw are fully satisfied. No such license is required for a BESS with a power rating of less than 1 MW. No BESS with a power rating greater than 10 MW shall be licensed.

3. To the maximum extent feasible, all new BESS shall be located on previously-developed commercial industrial sites, landfills, repurposed building pads or roadways. Construction on undeveloped land of any kind shall be minimized to the extent possible, but in no case shall exceed 25% of the total gross square footage of the proposed site. Total site square footage per applicant shall not exceed five acres.

4. To minimize forest land conversion, any BESS project defined in this bylaw shall not include clear-cutting of forest land in excess of one-half (.5) of an acre.

Section D: LICENSING REQUIREMENTS

1. Any application for a License to construct or operate a BESS shall include the following:

- a. Name of the applicant.
- b. Address of the applicant.
- c. Location of the proposed BESS storage equipment.
- d. Power rating and storage capacity of the proposed BESS equipment.
- e. The applicant shall provide a training plan, approved by the Town Fire Chief, for all specialized training required to respond to any emergency incident involving the BESS equipment. Said plan shall provide for training on an annual basis.
- f. The applicant shall provide an Emergency Operations Plan (EOP) as required by the applicable National Fire Protection Association (NFPA) standards in effect at the time of construction.
- g. The applicant shall provide a Hazard Mitigation Analysis (HMA) as required by the applicable NFPA standards in effect at the time of construction.
- h. The applicant shall provide a description of battery components and specific chemical and physical makeup and composition.
- i. The applicant shall prepare an air dispersion model and analysis to determine the extent and effects of a thermal runaway event affecting at least 50% of the battery cells proposed for use as part of the BESS equipment.
- j. The applicant shall prepare an analysis to determine the extent and effects of a thermal runaway event affecting at least 50% of the BESS cells proposed for use as part of the BESS equipment.
- k. The applicant shall prepare an analysis of the manpower and equipment needs for an emergency response to a thermal runaway event affecting at least 50% of the BESS cells proposed for use as part of the BESS storage equipment.
- l. The applicant shall provide such other analyses as may be requested by the Town, including but not limited to the Town Fire Department, related to the public health, safety, convenience, or welfare and the operation of the proposed BESS equipment.

2. Any application for a License to construct and operate a BESS shall include an EOP which provides the following information in addition to that required to meet NFPA standards:

- 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. 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.
- f. Identification of all hazards associated with the potential for fire, explosion, release of liquids or vapors, damage to critical moving parts, or other potentially dangerous conditions related to the BESS equipment.
- g. Determination of the effective response force (manpower) and necessary equipment to respond to each of the hazards so identified, and a comparison of the Town's actual response force and existing equipment to the effective response force and necessary equipment to identify gaps or deficiencies.
- h. Creation of an emergency evacuation plan tailored to the Town and each of the hazards so identified.
- i. Creation of an emergency response guide with specific protocols and procedures for Town emergency responders for each of the hazards so identified and the necessary manpower and equipment for each response scenario.
- j. Other procedures or information as determined necessary by the Licensing Board to provide for the safety of occupants, neighboring properties, and emergency responders.

SECTION E. REQUIRED LICENSING FINDINGS

No license to construct and operate a BESS shall be issued unless the Licensing Board finds that:

1. The EOP, HMA, evacuation plan, and other emergency response documents are sufficient in content and detail to protect the public health, safety, convenience, and welfare.
2. The manpower, equipment, and other resources available to the Town's emergency responders are sufficient to respond to a potential hazard or emergency response scenario associated with the proposed BESS equipment.
3. The applicant has adequately and completely identified all hazards associated with the operation of the BESS system equipment in the location proposed.

4. The BESS equipment will be in a location that avoids or minimizes risk, and will not cause undue or excess risk, to the public health, safety, convenience, and welfare.
5. The potential hazards associated with the BESS equipment in the particular location proposed can be appropriately managed and minimized.
6. There are no other considerations that would result in operation of the BESS system equipment in the particular location creating an undue or unacceptable risk to the public health, safety, convenience, and welfare, and the project to the greatest extent feasible has avoided or minimized adverse impacts to the health, safety, convenience and welfare of the town of Wendell.

SECTION F. LICENSING BOARD USE OF INDEPENDENT CONSULTANTS

1. When reviewing or commenting upon any application which proposes battery energy storage systems between 1 MW, not to exceed 10 MW, the Licensing Board, may seek the services of an independent consultant to conduct a professional review and advise the Boards on technical aspects of the applicant's proposal required by this general bylaw, including engineering, environmental preservation, traffic, public safety, convenience and welfare. All reasonable expenses incurred by the Boards for such reviews shall be paid for by the applicant. The Boards shall notify the applicant in writing of the estimated costs for the reviews.
2. Review fees shall be paid by the applicant within 10 days of receipt of the notification. The review fees shall be held by the Town Treasurer in a separate account. The Licensing Board may request additional funds if needed to cover the cost of outside review in the same manner as above. Failure by the applicant to make timely payments shall be adequate reason to deny the application.
3. The selection of an independent consultant may be appealed by the applicant to the Select Board. Such appeals are limited to claims that the consultant selected has a conflict of interest or does not possess the minimum required qualifications. The minimum qualifications consist of either an educational degree in the field at issue or a related field, or three or more years of practice in the field at issue or a related field. Any required time limits for action upon an application by the Licensing Board shall be extended by the duration of the administrative appeal. In the event that no decision is made by the Select Board within one month following the filing of the appeal, the selection made by the Licensing Board shall stand.

SECTION G. INSURANCE & FINANCIAL SURETY

Any applicant for a License to construct and operate a BESS shall also provide the following:

1. Proof of liability insurance in an amount \$100 Million to cover loss or damage to person(s) and structure(s) occasioned by the use or failure of any BESS facility including coverage for fires, explosions and flooding events.

2. A cash escrow account or other form of financial surety (*e.g.* a bond) acceptable to the Town of Wendell, pursuant to M.G.L. c. 44, §53G1/2 to be provided in the event of final licensing approval of the application and which shall be held by the Town, to cover the cost of removal, recycling, and disposal of the installation and remediation and/or restoration of the site in the event the Town must remove the installation and remediate and/or restore the site to its natural preexisting condition. The final amount and form of surety must be determined to be reasonable by the Licensing Board as the granting authority, but in no event should the amount exceed more than 125 percent of the cost of removal and compliance with the additional requirements set forth herein unless the Licensing Board makes a specific, documented finding that a higher amount is required to ensure removal and compliance for the installation in question. The project applicant shall submit a decommissioning plan with a fully inclusive estimate of the costs associated with removal and site restoration, prepared by a qualified engineer. The amount shall include a mechanism for calculating increased removal and site restoration costs due to inflation. Said estimated cost shall not deduct the value of material recycling given the potential expense and difficulty of recycling. Said surety in its full amount shall be presented to the Licensing Board prior to the commencement of construction. All legal documents required to enable the Town of Wendell to exercise the rights and responsibilities under the plan to enter the property, decommission the installation, and physically remove the installation and restore the site to its natural condition shall be included in the decommissioning plan.

SECTION H. ENFORCEMENT OF THE BYLAW

The Licensing Board shall have the authority to enforce the provisions of this bylaw through the issuance of cease-and-desist orders, criminal court actions, or civil court actions. As an alternative to criminal prosecution in a specific case, the Licensing Board may issue a citation under the noncriminal disposition procedure pursuant to M.G.L. c.40, §21D.

SECTION I: SEVERABILITY & CONFLICTS

The invalidity of any section or provision of this bylaw shall not invalidate any other section or provision thereof. If any provisions of this bylaw are found to be in conflict with provisions of other town bylaws, the provisions of this bylaw shall supersede the other bylaws.