

**Town of Durham  
Land Use Ordinance**

As Adopted at Town Meeting  
April 6, 2024

*Proposed Revisions  
For Town Meeting  
April 5, 2025*

***PART 2 – DRAFT AMENDMENTS TO  
APPLY CONTRACT ZONING TO ANY  
LARGE BATTERY ENERGY STORAGE  
OR SOLAR ENERGY SYSTEM & ENACT  
BESS STANDARDS  
(LUO Articles 2, 3, 5, &19)***

NOTE: Proposed changes are indicated with ~~strikethrough~~ text indicating language to be deleted and underlined text indicating language to be inserted. Explanatory notes are in ***(bold italic text enclosed by parentheses)***.

## DRAFT SECTION 2.4

### CONTRACT ZONING

[DRAFT AMENDMENTS March 2025]

*NOTE: The Town Attorney has determined that large-scale Battery Energy Storage Systems (BESS) connected to the powerline grid would meet the definition of “essential services” and thereby qualify as a permitted use not subject to Planning Board conditional use criteria for public safety, noise, and scale of project criteria. Such high-voltage energy storage systems pose safety and environmental risks not currently addressed in the Land Use Ordinance. In addition to enacting needed performance standards to ensure that such facilities are designed and constructed with adequate safety and other performance standards, the Town Attorney has recommended requiring contract zoning for large BESS and solar energy systems. Such facilities would only be allowed as a special, contract zoning district approved at Town Meeting. This added mechanism will allow Town voters to decide acceptable locations for such facilities and are convinced that any proposed project benefits the Town and has limited impacts in keeping with Durham’s rural character and limited public services.*

#### **Section 2.4 Contract Zoning**

##### **A. Authority and Purpose.**

1. Pursuant to 30-A M.R.S.A. § 4352, contract zoning is hereby authorized where, due to the unique nature or location of a proposed development, the Town finds it necessary or appropriate to allow flexibility for the development of the land, and to be able to impose, by agreement with the property owner, conditions or restrictions that are not generally applicable to other properties similarly zoned. All rezoning under this Section 2.4 shall be consistent with the Town of Durham Comprehensive Plan and complementary to existing and permitted uses within the original zones. Use of the provisions of this Section 2.4 shall be limited to where a rezoning is requested by the owner of the property or by an applicant with a legal interest in the property. Nothing in this Section 2.4 shall authorize an agreement for rezoning that is inconsistent with the Comprehensive Plan.
2. Contract zoning shall promote the general welfare of the residents of the Town of Durham. The Board of Selectmen shall approve a contract zoning request for placement on the Town Warrant only if it determines, in its discretion, that the proposed contract zoning is in the public interest and will have beneficial effects on the Town as a whole which would not result if the property were developed under the existing zoning district classification, and is otherwise in conformance with this Section 2.4.
3. No contract zone shall be effective until it has been approved by a vote of Town Meeting.

##### **B. Application Process.**

1. The person or entity proposing contract zoning shall submit an application for contract zoning to the Town Manager, which shall include, at a minimum, the following elements:
  - a. A map showing existing and proposed zoning district lines;
  - b. The address or exact location of the request, including the Durham tax map references for the property to be rezoned;
  - c. The name, address and telephone number of the property owner and of the applicant, if the applicant is not the owner;
  - d. Evidence of the applicant's right, title or interest in the property;
  - e. A site analysis that describes the major features of the property, allowing the Planning Board and Board of Selectmen to make informed judgments about how it will be used;
  - f. A conceptual development plan showing the approximate layout of all buildings, structures, streets, driveways, parking areas and other significant improvements to be constructed on or above the surface of the ground plus any proposed open spaces, conservation areas, buffer areas or other features of the development to show subsurface infrastructure installations, building plans, engineering plans or other details which would be required for a subdivision plan or site plan;
  - g. A statement describing the existing use of the property and the proposed new use and development, and describing how the proposed contract zone will be consistent with the Town of Durham Comprehensive Plan, will be consistent with existing and permitted uses within the existing zoning district classification of the property, will be in the public interest, and will have beneficial effects on the Town as a whole which would not result if the property were developed under the existing zoning district classification;
  - h. A proposed contract zoning agreement which complies with the requirements of subsection C, below;
  - i. Any other information requested by the Town Manager and/or the Code Enforcement Office; and
  - j. A nonrefundable application fee as specified in the fee schedule established by order of the Board of Selectmen.
2. Nothing within this Section 2.4 shall prevent the Board of Selectmen from meeting in executive session pursuant to 1 M.R.S.A. § 405 to discuss matters relating to a potential or proposed contract zoning application.
3. The Town Manager or designee will review the application and may engage with the applicant and Town Attorney on an advisory basis to develop the form and content of the proposed contract zoning agreement. Upon being satisfied that the application is sufficiently complete for review by the Planning Board and the Board of

Selectmen, the Town Manager will schedule a joint meeting of the Planning Board and the Board of Selectmen to commence review of the request for contract zoning, at which time a public hearing shall be held in accordance with the requirements of 30-A M.R.S.A. § 4352, Subsection 8. Notice of this hearing shall be posted in the Town Clerk's office at least fourteen (14) days prior to the public hearing and shall be published at applicant's expense in a newspaper of general circulation within the Town at least two times. The date of first publication shall be at least seven days prior to the hearing. The applicant also shall mail by certified mail, at least fourteen (14) days prior to the public hearing, notice of hearing to the owners of the property to be rezoned and to the owners of all property within five hundred (500 ft) feet of the affected lot(s) or parcel(s). This notice shall contain the date, time and location of the hearing and a copy of the proposed conditions and restrictions, with a map indicating the property to be rezoned. If the area to be rezoned is within a source water protection area, the applicant must also provide notice, by certified mail, at least fourteen (14) days prior to the public hearing to the public drinking water supplier. The Town shall retain evidence of the required publication and mailing. So long as notice has been provided in accordance with this Section, failure of any person to receive notice will not invalidate a contract zoning agreement.

4. Joint Planning Board/Board of Selectmen meeting.

The joint Planning Board/Board of Selectmen meeting shall be presided over by the Chair of the Board of Selectmen and shall be conducted so as to include, but not be limited to, the following elements:

- a. Presentation by the applicant;
  - b. Comments from Town staff;
  - c. Discussion among members of the Planning Board and the Board of Selectmen, which may include questions posed to the applicant and staff;
  - d. Comments from members of the public (this shall constitute the public hearing by the municipal reviewing authority required by 30-A M.R.S.A. § 4352, Subsection 8);
  - e. Response or rebuttal from applicant;
  - f. Comments from members of the Planning Board concerning the land use implication of the proposed contract zoning amendment; and
  - g. Board of Selectmen discussion of the contract zoning amendment.
5. If the Board of Selectmen determines that professional assistance is necessary to guide its consideration of the proposed contract zoning, it may request the applicant to make a deposit into escrow of such funds necessary to permit such review. If the applicant fails or refuses to make the requested deposit, the application shall be deemed abandoned.
6. The joint Planning Board/Board of Selectmen meeting may be continued from time to time by majority vote of all members from both Boards present and voting. The

- Planning Board members will, at the conclusion of the joint meeting, vote as a nonbinding recommendation to the Board of Selectmen either to:
- a. Support the proposed contract zoning amendment;
  - b. Support the proposed contract zoning amendment with modifications; or
  - c. Oppose the proposed contract zoning amendment.
7. At the conclusion of the discussion, the Board of Selectmen shall, prior to adjourning, or at a subsequent meeting to be held within thirty (30) days, vote either to:
- (a) Direct that the proposed contract zone be put on a future warrant for vote by the Town, either as presented or with amendments or conditions approved by the Board of Selectmen;
  - (b) Reject the request for contract zoning; or
  - (c) Propose amendments to the contract zoning agreement, subject to agreement by the applicant and presentation in final format for final vote by the Board of Selectmen.
8. The Board of Selectmen shall not direct that the contract zoning agreement be placed on the Town Warrant unless it has found, after the required hearing, that the contract zoning amendment is consistent with the Town of Durham Comprehensive Plan, is compatible with the existing and permitted uses within the existing zoning district classification of the property, is in the public interest, and will have beneficial effects on the Town as a whole which justify modification of the existing zoning district classification. The Board of Selectmen will state its reasons for its findings and conclusions on each of those determinations.
9. The applicant may withdraw a request for a contract zoning agreement by submitting written notice to the Town Manager at any point prior to posting of the warrant for the town meeting at which the agreement will be considered.
10. Upon adoption by a vote of Town Meeting, the language of the contract zone shall be incorporated by reference into this ordinance. The location of the contract zone shall be indicated on the Official Zoning Map. In addition, the contract zone and any ancillary agreements shall be recorded in the Androscoggin County Registry of Deeds.
11. Any rezoning pursuant to this section that affects a Shoreland district, as identified by this Ordinance, shall not take effect until approved by the Commissioner of Environmental Protection as required by Title 38 M.R.S. § 438-A, Subsection 3.
12. Subsequent to adoption of the contract zone by a vote of the Town Meeting, no development may be commenced until all other required land use approvals are approved by the applicable reviewing authority. In making its review, the reviewing authority shall apply all approval and performance standards set forth in this Ordinance, unless specifically modified by the contract zoning agreement.

### **C. Contract zoning agreement.**

1. The contract zoning agreement shall include a provision granting the Town of Durham power to enforce all conditions and restrictions, both through enforcement action pursuant to this chapter and through legal action for specific performance.
2. Conditions and restrictions imposed under the authority of this section shall relate only to the physical development and operation of the property and, though not limited to, may include, by way of example:
  - (a) Limitations on the number and types of uses permitted;
  - (b) Restrictions on space and bulk standards and on the scale and density of the development;
  - (c) Specifications for the design and layout of buildings and other improvements;
  - (d) Preservation of open space and buffers, provisions for public access to or protection of natural areas and historic sites;
  - (e) Contributions toward the provision of municipal services impacted by the development;
  - (f) Performance guarantees securing completion, maintenance, or decommissioning of improvements;
  - (g) Provision for enforcement and remedies for breach of any condition or restriction; and
  - (h) Provision for reservation or dedication of land for public purposes.
3. The contract zoning agreement shall include provisions for termination of the contract zone if the proposed development is not substantially commenced or completed by a stated deadline. The deadline for substantial commencement of the development shall not exceed two years from approval of the contract zoning agreement by town meeting, and the deadline for substantial completion of the development shall not exceed three years following substantial commencement.
4. Effects of the agreement. The conditions and restrictions set forth in the agreement shall run with the land and bind all future owners of the land and any other person who claims an interest in the property, but shall not preclude the owner from making other uses of the property that are permitted under the general provisions of this Ordinance, subject to applicable permitting. Approval of a contract zoning agreement shall not obligate the applicant to undertake the proposed development, but any development that is conducted by the applicant shall be in accordance with the contract zoning agreement.
5. Modifications and amendments. The contract zoning agreement may allow for changes or modifications to the development, but shall specify the procedure for approval of any such changes or modifications, setting forth categories of changes or modifications which would require Planning Board approval only, those which would require Board of Selectmen approval, and those that would require approval by a vote at Town Meeting.

6. No rights created before final Town meeting vote. The submission of a request for contract zoning under this Section, the payment of application fees, or the expenditure of funds by the applicant in presenting such a request shall not create any vested rights in the application. The conduct of meetings and hearings, the review of the application, comments by Town officials or staff, preliminary votes, findings or determinations, preliminary subdivision or site plan approval, and the availability of contract zoning under this Section 2.4 shall not be construed as creating any entitlement to approval of a request for contract zoning. The decision whether or not to rezone remains subject to a vote at Town Meeting, exercising its sole and exclusive judgment as the legislative body of the Town of Durham.

**Amendment to Section 3.1 - KEY**

CZ – Permitted only pursuant to an approved Contract Zoning Agreement (see Section 2.4)

**Amendment to Table 3.1 – TABLE OF LAND USES**

<b>Land Use</b>	<b>RRA</b>	<b>RP</b>	<b>AP</b>	<b>RP(SZ)</b>	<b>LR(SZ)</b>
44. Solar Energy Systems					
a. Medium-scale	CER & SPR	No	CER & SPR	No	No
b. Large-scale	CU & SPR <u>CZ also required for projects with solar panel surface area &gt; 400,000 sq. ft.</u>	No	CU & SPR <u>CZ also required for projects with solar panel surface area &gt; 400,000 sq. ft.</u>	No	No
<u>51. Battery Energy Storage Systems of &gt; 1MWh</u>	<u>CZ</u>	<u>No</u>	<u>No</u>	<u>No</u>	<u>No</u>

**Amendments to Article 5 to add Contract Zoning for Large Solar Energy Systems**

**5.24 SOLAR ENERGY SYSTEMS**

- A. **Applicability:** To facilitate development of renewable and non-polluting energy but minimize potential adverse effects to the scenic and natural resources of the Town and to support the goals of the Comprehensive Plan to maintain the Town’s rural quality, solar energy systems are subject to the following review process and the performance standards of this article:

1. Roof mounted, building integrated, and small-scale ground mounted systems with a total solar panel surface area of up to eight thousand (8000 sq. ft.) square feet are considered accessory uses and are exempt from the requirements of this article.
2. Medium-scale, ground-mounted systems with a total solar panel surface area of between eight thousand (8000 sq. ft.) square feet and twenty thousand (20,000 sq. ft.) are subject to site plan review.
3. Large-scale, ground-mounted systems with a total solar panel surface area of more than twenty thousand (20,000 sq. ft.) square feet but less than four hundred thousand (400,000 sq. ft.) square feet are subject to conditional use and site plan reviews.
4. Large-scale, ground-mounted systems with a total solar panel surface area of more than four hundred thousand (400,000 sq. ft.) square feet are subject to contract zoning approval under Section 2.4 and site plan review.

***NOTE: When the Conservation Commission and Planning Board enacted standards for Solar Energy Systems in 2024, they recognized that the Town needs to consider the location of large solar farms as well as safety concerns and potential visual impacts. Rather than doing a town-wide study of suitable and unsuitable locations, contract zoning provides a more efficient and suitable mechanism to control the location of very large solar farms.***



**DRAFT SECTION 5.8**  
**BATTERY ENERGY STORAGE SYSTEMS**  
**[DRAFT AMENDMENTS FEBRUARY 2025]**

***NOTE: The Town Attorney has determined that large-scale Battery Energy Storage Systems connected to the powerline grid would meet the definition of “essential services” and thereby qualify as a permitted use not subject to Planning Board conditional use criteria for public safety, noise, and scale of project criteria. Such high-voltage energy storage systems pose safety and environmental risks not currently addressed in the Land Use Ordinance. The draft revisions will establish needed performance standards to ensure that such facilities are designed and constructed with adequate safety and other performance standards.***

The following Section will be added in alphabetical order in Article 5 and the subsequent sections will be renumbered accordingly:

**Section 5.8. BATTERY ENERGY STORAGE SYSTEMS**

**5.8.1 Purpose.**

- A. The purpose of this section is to advance and protect the public health, safety, welfare, and quality of life by creating regulations for the installation and use of battery energy storage systems, with the following objectives:
- (1) To provide a regulatory scheme for the location, construction and operation of battery energy storage systems consistent with best practices and safety protocols;
  - (2) 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
  - (3) To mitigate the impacts of battery energy storage systems on environmental resources such as agricultural lands, forests, wildlife, wetlands and other natural resources.
- B. This article shall be construed to be consistent with state law, and state regulations, including but not limited to the provisions of the Maine Uniform Building and Energy Code and the International Fire Code (IFC). 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.

**5.8.2. Applicability.**

- A. The requirements of this Ordinance shall apply to battery energy storage systems permitted, installed, decommissioned or modified after the effective date of this amendment, excluding general maintenance and repair. Battery Energy Storage Systems (BESS) subject to this Ordinance are only those that exceed seventy-kilowatt-hour (70 kWh). BESS facilities that do not exceed the seventy kilowatt-hour (70 kWh) threshold are exempt from the requirements of this Ordinance and are permitted by right in all zoning districts.
- B. A battery energy storage system that is subject to this Ordinance is classified as a Tier 1, Tier 2 or Tier 3 Battery Energy Storage System as follows:

- (1) Tier 1 – Small-scale residential and commercial Battery Energy Storage Systems have an aggregate energy capacity of less than one-half Megawatt-hour (0.5 MWh) and, if in a room or enclosed area, consist of only a single energy storage system technology.
- (2) Tier 2 – Medium-scale commercial Battery Energy Storage Systems have an aggregate energy capacity equal to or greater than one-half Megawatt-hour (0.5 MWh) but less than one Megawatt-hour (1MWh) or are comprised of more than one storage battery technology in a room or enclosed area.
- (3) Tier 3 – Large-scale commercial and industrial Battery Energy Storage Systems have an aggregate energy capacity greater than one Megawatt-hour (1MWh) or are comprised of more than one storage battery technology in a room or enclosed area.

### **5.8.3. General Requirements.**

- A. 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.
- B. 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) subject to the requirements of the Maine Uniform Building and Energy Code, shall be designed, erected, and installed in accordance with all applicable provisions of the Maine Uniform Building and Energy Code. All Battery Energy Storage Systems shall comply with NFPA 855, Standard for the Installation of Stationary Energy Storage Systems.
- C. Energy storage system capacities, including array capacity and separation, are limited to the thresholds contained in NFPA 855.
- D. All Battery Energy Storage System components and connections shall meet or exceed the following minimum standards:
  1. Overall Installation: NFPA 70, 855, IFC, UL 9540, IEEE C2
  2. Battery Rack; UL 9540A
  3. Cell/Battery: UL 1642, 1973, & 9540A
  4. Fire/Gas Detection: IFC, NFPA 72 & 855
  5. Fire/Explosion Protection: IFC, NFPA 13, 15, 68, 69, & 855
  6. Communications/Battery Management System: UL 1741 & 9540, CSA C22.2 No. 340-201, IEEE 2686 & 2688
  7. Power Conversion System: UL 1741
  8. Interconnection: IEEE 1547 & 2800

### **5.8.4. Permitting Requirements for Tier 1 & Tier 2 Battery Energy Storage Systems.**

Tier 1 Battery Energy Storage Systems are allowed by right in all zoning districts, subject to applicable provisions of the Maine Uniform Building and Energy Code, and other applicable codes,

Tier 2 Battery Energy Systems located outside a building are subject to applicable provisions of

the Maine Uniform Building and Energy Code, and other applicable codes and the site plan review requirements of Article 8 and the standards of Section 5.8.6.

### **5.8.5. Permitting Requirements for Tier 3 Battery Energy Storage Systems.**

Tier 3 BESS shall meet the following minimum requirements unless otherwise specified in a contract zoning agreement:

- A. Utility Connections. All utility connections including associated equipment and utility equipment shall be placed underground or pad mounted, unless soil conditions, shape, or topography of the site as verified by the Town's Consulting Engineer and utility provider dictate above ground installation. Electrical transformers for utility interconnections may be above ground if required by the utility provider.
- B. Signage. Signage shall comply with the requirements of Section 5.25 [*number changes with enactment of this amendment*] of this Land Use Ordinance and the following additional requirements; in the event of a conflict between the provisions of Section 5.25 and this section, the requirements of this section shall prevail.
  - (1) 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.
  - (2) 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.
  - (3) Signage compliant with ANSI Z535 shall be provided on doors to rooms, entrances to BESS facilities, and on BESS outdoor containers.
- C. Lighting. Lighting of the Battery Energy Storage Systems shall be limited to that minimally required for safety, security and operational purposes and 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, shall be shielded to eliminate glare from abutting properties, shall be directed downward, and shall incorporate cut-off fixtures to reduce light pollution.
- D. Vegetation and tree-cutting. Areas within thirty (30 ft) 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.
- E. Setbacks.
  - (1) Battery Energy Storage Systems shall be set back a minimum of one hundred (100 ft) feet from all side, rear, and front lot lines. Required vegetative buffers can be located within the 100-foot setback.

- (2) 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.
- F. Fencing Requirements. Battery Energy Storage Systems, including all mechanical equipment, shall be enclosed by a minimum eight-foot-high fence with a self-locking gate to prevent unauthorized access unless housed in a dedicated-use building. Security barriers, fences, landscaping, and other enclosures must not inhibit required air flow to or exhaust from the BESS and components. Electrical equipment greater than 1,000V require a separate and additional means to restrict access. NFPA 855 requires specialty safety systems to be provided based on the BESS chemistry and installed location.
- G. A visual impact assessment prepared by a registered landscape architect addressing potential view impacts on public roads and neighboring properties with proposed buffering treatments meeting the requirements of subsection H.
- H. Screening and Visibility. A vegetated buffer shall be required around the Battery Energy Storage System consisting of a landscaped strip at least fifty (50 ft) feet wide measured from each boundary line of the BESS project site around the entire perimeter except for any parts of the perimeter that have an equivalent existing natural buffer or determined to be unnecessary per the visual impact assessment. The BESS project site shall be landscaped and maintained with a buffer of plant materials that are mature enough to effectively screen the view to eight (8 ft) feet above ground level of the BESS facility components from adjacent properties all year round. Non-invasive plant species, pollinator-friendly and wildlife-friendly native plants, shrubs and trees shall be used. When a buffer is not required based on the results of a view analysis, buffer requirements may be reduced or eliminated, especially when the adjoining property is subject to an active agricultural use and the reduction or elimination is approved by the Planning Board.
- I. Noise: An Acoustic Study shall be provided in order to ensure that sound generated by the BESS project complies with Section 5.20 [number changes with enactment of this amendment].
- J. The access driveway shall be required to be twenty (20') feet wide with twelve (12") inches of aggregate sub base, six (6") inches of aggregate base, and drainage as shown in Appendix 1, Section 1.3, Figure 3 of this Ordinance, however no shoulders or pavement are required. Access gates erected onsite should be at least twelve (12 ft) feet wide, accessible via Durham Fire Department Knox Box. Access to all four sides of each enclosure shall satisfy the needs of the Fire Department per the Emergency Operations Plan.
- K. Battery Storage. 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 Durham Fire Department in advance if the type of battery or batteries used onsite is to be changed.
- L. Decommissioning Plan. The applicant shall submit with its application a decommissioning plan to be implemented upon abandonment and/or in conjunction with removal of the facility. The owner or operator of the BESS shall notify the Code Officer 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:
- (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. The fund must be reviewed and updated every five (5) years to account for inflation or changes in decommissioning costs;
  - (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.
- M. Decommissioning Fund. The owner and/or operator of the energy storage system shall continuously maintain a fund or other surety acceptable to the Town, in a form approved by the Planning Board and Town Attorney, 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.
- N. Proof of Liability Insurance. The applicant or property owner shall provide evidence of commercial liability insurance in an amount and type generally acceptable in the industry 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 bylaw.

#### **5.8.6. Site plan application.**

For a Tier 2 or Tier 3 Battery Energy Storage System the site plan application shall include the following information, in addition to that required by Article 8 of this Ordinance:

- A. A 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.
- B. 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 or other permits.

- 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. Large-scale fire test data, evaluation information, calculations, and modeling data. For any of the following, UL 9540A fire test data must be made available to the Planning Board and Fire Department for review: - BESS systems with a capacity of greater than 50kWh - BESS systems with spacing between arrays of less than three (3 ft) feet.
- E. Safety data sheet (SDS) that address response safety concerns and extinguishment.
- F. 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 NFPA 855 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 Maine 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 Code Enforcement Officer and the Durham Fire Department prior to final inspection and approval and maintained at an approved on-site location.
- G. 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 Section 5.8.8.
- H. 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 NFPA 855. Maintenance provisions will be driven by manufacturer requirements for the specific listed system. A permanent copy shall also be placed in an approved location to be accessible to facility personnel and a copy shall be provided to the Code Enforcement Officer and Fire Chief.
- I. Depending on the location of the BESS in relation to and its interaction with the electrical grid, system interconnections into utility grids shall be in accordance with NFPA 855.
- J. Prior to the issuance of the building permit, engineering documents must be signed and sealed by a Maine Licensed Professional Engineer.
- K. Emergency Operations Plan. An Emergency Operations Plan compliant with NFPA 855 is required. A copy of the Emergency Operations Plan approved by the Durham Fire Chief shall be given to the system owner, the local fire department, and local code enforcement official. For so long as the BESS is operational, the operator shall provide the Fire Department, Code Officer, and Town Manager'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 present onsite not later than two (2) hours after notification by the Fire 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:

- (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 startup following cessation of emergency conditions.
  - (2) Procedures for inspection and testing of associated alarms, interlocks, and controls, including time intervals for inspection and testing.
  - (3) Procedures to be followed in response to notifications from the Battery Energy Storage Management System (BESMS), 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 like a safety data sheet (SDS) that will address response safety concerns and extinguishment when an SDS is not required.
  - (6) All Tier 3 Battery Energy Storage Systems must provide an adequate fire protection water supply to ensure efficient emergency response. The system must include multiple hydrant connection points strategically placed to address concerns about wind direction and ensure adequate water coverage for the entire BESS compound. Hydrants must be located so that no part of the facility is more than one thousand (1,000 ft) feet from a connection point. The water supply system must have sufficient capacity and pressure to meet the needs of potential fire suppression activities as determined by the Fire Chief.
  - (7) 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 and any affected soils from the facility.
  - (8) Other procedures as determined necessary by the Fire Chief to provide for the safety of occupants, neighboring properties, and emergency responders.
  - (9) 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.
- L. Yearly Site Inspection Plan. Such plan shall specify that a yearly site plan is conducted by a Maine Licensed Professional Engineer retained by the operator of the facility to document and verify that the system and its associated controls and safety systems are in proper working condition per requirements set forth in applicable safety codes. A copy of the engineer's annual inspection report shall be provided to the Code Enforcement Officer and Fire Chief.

#### **5.8.7. Ownership Changes.**

If the owner of the Battery Energy Storage System changes or the owner of the property changes, the 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 Code Enforcement Officer 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 Code Enforcement Officer in writing and meet with any permitting authority from which the original applicant received a permit.

#### **5.8.8. Safety.**

- A. 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) or approved equivalent, 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 (or approved equivalent) 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.
- 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.
- D. Yearly Site Inspection. A yearly inspection shall be conducted by a Maine Licensed Professional Engineer per the Yearly Site Inspection Plan. A Corrective action plan shall be developed for any open or continuing issues that are reported. A report describing the results of the site inspection and corrective action plan shall be provided to the Durham Fire Department, Code Enforcement Officer and Town Manager's Office.

#### **5.8.9. Abandonment.**

The Battery Energy Storage System shall be considered abandoned when it ceases to operate consistently for more than ninety (90) days. If the owner and/or operator fails to comply with decommissioning upon any abandonment, the Town 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 Tier 2 BESS or Tier 3 and restoration of the site in accordance with the decommissioning plan.

### **Section 19.1 Definitions. [To be incorporated into the list of definitions]**



The following definitions for BESS related terms will be added in alphabetical order and the definitions renumbered accordingly:

ANSI — American National Standards Institute. A private, non-profit organization that oversees the development of voluntary consensus standards for products, services, processes, systems, and personnel in the United States.

BATTERY ENERGY STORAGE SYSTEM (BESS) — A physical container or building with batteries, battery racks, inverters, and ancillary equipment used to store and discharge electrical energy. BESS facilities may include monitoring, fire suppression, and cooling systems.

BATTERY ENERGY STORAGE MANAGEMENT SYSTEM (BESMS) — 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 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 bylaw, batteries utilized in consumer products are excluded from these requirements.

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.

CSA — Canadian Standards Association. A standards organization that develops safety and performance standards for various products, including electrical and energy systems.

DEDICATED-USE BUILDING — A building that is built for the primary intention of housing Battery Energy Storage System equipment, 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 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.

IEEE — Institute of Electrical and Electronics Engineers. A global standards-setting organization for electrical, electronic, and energy systems.

IFC — International Fire Code. A set of fire safety standards regulating construction, design, and

fire protection for buildings, including BESS facilities.

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.

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.

UL — Underwriters Laboratory. A global safety certification company that sets standards for product safety and performance, including those for batteries and BESS components.