1 RCNY §101-19

CHAPTER 100

Subchapter A Administration

§101-19 Energy Storage Systems

(a) Applicability and scope. This section governs the design, filing, construction, installation, commissioning, operation, maintenance, decommissioning of and establishes reporting requirements for the following categories of energy storage systems (ESS):

(1) ESS that exceed the minimum aggregate capacities established in NFPA 855 when installed indoors.

(2) ESS that exceed the minimum aggregate capacities established in the New York City Fire Department's (FDNY) rules when installed outdoors.

(3) Indoor and outdoor ESS installations associated with one- and two-family dwellings.

(b) Definitions. For the purposes of this section, the following terms have the following meanings:

(1) Certificate of Approval (COA). As defined in the New York City Fire Code (Fire Code).

(2) Energy Storage System (ESS). One or more devices that, when assembled together, are capable of storing energy in order to supply electrical energy at a future time to the local power loads, to the utility grid, or for grid support.

(3) NFPA 855. National Fire Protection Association 855 - Amendment Relating to the Standard for the Installation of Stationary Energy Storage Systems – 2020 edition, as amended by the New York City Department of Buildings (DOB).

(c) Codes. All work relating to the design, filing, construction, installation, commissioning, operation, maintenance, decommissioning and reporting of ESS must comply with the requirements of the New York City Construction Codes (Construction Codes) set forth in title 28 of the Administrative Code of the City of New York. All such work must also comply with the requirements of the New York City Electrical Code (Electrical Code), the Fire Code, the New York City Energy Conservation Code, the New York City Zoning Resolution, the FDNY rules, the DOB rules, and any other applicable laws and rules.

(d) General design and installation requirements for ESS.

(1) Indoor ESS systems must comply with the following requirements:

(i) ESS must comply with NFPA 855.

(ii) Equipment listing, testing, evaluation, and certification:

(A) ESS must be listed in accordance with UL 9540, as referenced in section 3616-07 item 2.3.7, unless specifically exempted by NFPA 855.

(B) UL 9540A, as referenced in section 3616-07 item 2.3.7, large-scale fire testing must be performed on all ESS, unless specifically exempted by NFPA 855.

(C) A COA must be obtained, as required by the Fire Code and FDNY rules.

(2) Outdoor ESS systems must comply with the FDNY rules.

(3) ESS installations associated with one- and two-family dwellings must comply with paragraph (1) of this subdivision for indoor ESS installations and paragraph (2) of this subdivision for outdoor installations.

(e) Construction document approval. An application for construction document approval for construction related to an ESS must be filed with DOB. Construction documents filed in connection with the ESS and related construction must comply with the requirements of the Construction Codes. In addition, such applications must include the following information, as applicable:

(1) Plans and specifications associated with the ESS submitted in accordance with NFPA 855.

(2) Zoning analysis demonstrating that the ESS complies with the New York City Zoning Resolution.

Exception: An accessory indoor ESS installation within an existing building envelope that complies with the definition of "accessory use" in the New York City Zoning Resolution does not require a zoning analysis.

(3) For a roof installation, a roof plan demonstrating that the ESS does not obstruct access for firefighting in accordance with the Fire Code and maintenance of roof equipment.

(4) For a site installation, the site plan must show access to energy storage equipment and site buildings for firefighting in accordance with the Fire Code and for maintenance.

(5) Proof of compliance with the flood-resistant construction requirements of the New York City Building Code (Building Code).

(6) When a site-specific approval is required pursuant to subdivision (f) of this section, an Office of Technical Certification and Research (OTCR) conditional acceptance letter.

(7) When a site-specific approval is not required pursuant to subdivision (f) of this section, an application for construction document approval must include:

(i) A COA issued by FDNY for the proposed ESS; and

(ii) Where required by the Fire Code or the FDNY rules, Installation Approval issued by FDNY.

(f) Site-specific review.

(1) Applicability. ESS installations subject to the requirements of this section require site-specific review and approval by OTCR.

Exception: OTCR review and approval are not required for the following:

(i) ESS installations associated with one- and two-family dwellings that comply with the applicable provisions of NFPA 855, provided that the equipment has been approved by the FDNY through a COA or other listing that accounts for thermal runaway conditions approved by DOB and FDNY.

(ii) At the discretion of OTCR, an ESS that has received a COA from the FDNY may not require site specific equipment evaluation and approval.

(2) Site-specific application contents. A submission for site-specific evaluation of the proposed ESS must include:

(i) The OTCR site-specific application form, and all required fees;

(ii) The construction documents required pursuant to subdivision (e) of this section;

(iii) Documentation of peer review as applicable in accordance with paragraph (3) of this subdivision;

(iv) A COA issued by the FDNY for the proposed ESS;

(v) Where required by the Fire Code or the FDNY rules, a letter of conditional acceptance issued by the FDNY; and

(vi) An OTCR conditional acceptance letter and an OTCR final certification letter uploaded to DOB's electronic filing system.

(3) Peer review. Peer review is required for site-specific ESS installations except as directed by DOB. The peer reviewer(s) must review the plans and specifications for compliance with the provisions of NFPA 855.

(i) Peer reviewer. The peer reviewer(s) must be one or more engineers licensed and registered in the state of New York with relevant experience with and knowledge about fire protection engineering and ESS applications and systems. The peer reviewer must also:

(A) Be retained by the owner of the ESS and be approved by DOB prior to commencing the review,

(B) Be independent from the registered design professional of record; and

(C) Avoid conflicts of interest by not engaging in any activities that might compromise their objective judgment and integrity, including but not limited to having a financial or other interest in the design, construction, installation, manufacture or maintenance of the structures or components that they are reviewing.

(ii) During the review, the peer reviewer(s) must verify that:

(A) The proposed design of the ESS and supporting infrastructure complies with the Construction Codes, Electrical Code, the Fire Code and FDNY rules;

(B) The proposed design of the ESS and supporting infrastructure conforms to NFPA 855, UL 9540 listing conditions, and conditions specified under the COA; and

(C) All applicable UL 9540A test data has been interpreted as compliant with the intent of the provisions of the New York City Construction, Electrical, and Fire codes, and safety benchmarks have been established based on such interpretation to mitigate thermal runaway propagation and site-specific hazard conditions.

(iii) The peer reviewer(s) must prepare a report summarizing the findings of the peer review. OTCR will not issue a conditional acceptance letter for the ESS site-specific review in accordance with paragraph (4) of this subdivision until a peer review report has been submitted indicating the ESS design shown on identified plans and specifications complies with the requirements of this section. Such report must be separately signed and sealed by each peer reviewer.

(iv) If a dispute arises between the registered design professional of record and the peer reviewer regarding compliance with the provisions of this section and the parties are unable to resolve the dispute, such dispute must be reported to DOB in the form of a letter from the registered design professional of record. DOB will either resolve the dispute or to allow a change of the peer reviewer(s).

(v) The registered design professional of record for the ESS retains sole responsibility for the design of the ESS. The activities and reports of the peer reviewer(s) do not relieve the registered design professional of record of this responsibility.

(4) Conditional acceptance. Upon demonstration of compliance with the requirements of this section, OTCR will issue a conditional acceptance letter. The applicant must submit the conditional acceptance letter in connection with the application for construction document approval.

(g) Certificate of Occupancy. Where the ESS is not accessory to the principal use on the same zoning lot, a new certificate of occupancy must be issued by DOB to reflect the zoning Use Group of the non-accessory ESS pursuant to Article 118 of Title 28 of the Administrative Code.

(h) Permits. Prior to any work being performed, permits must be obtained for both the construction work and the electrical work.

(1) Where the Construction Codes require the filing of technical reports identifying those responsible for required special, progress and final inspections, such reports must be filed with DOB.

(2) Before commencing any electrical work, an application for an electrical work permit must be filed with DOB in accordance with the Electrical Code, including an electrical plan review as required by the DOB rules. The construction permit for the installation of the energy storage equipment will not be issued until the electrical permit has been issued.

(i) Job sign-off. The registered design professional must take all steps required by DOB for the issuance of a letter of completion, or, if applicable, a certificate of occupancy, pursuant to section 28-116.4 of the Administrative Code, including but not limited to, the completion of the following:

(1) Inspections. Any construction work performed in connection with the construction application, including but not limited to the energy storage equipment, must be inspected in accordance with Administrative Code. The electrical work performed in connection with the energy storage equipment must be completed and inspected in accordance with the Electrical Code.

(2) Commissioning. Where required by NFPA 855, and where required by the Fire Code or the FDNY rules, commissioning must be performed accordingly. A commissioning report must be submitted to DOB as required.

(3) Final acceptance. Where a site-specific approval is required pursuant to subdivision (f) of this section, a registered design professional must submit a final certification attesting that the installed ESS is in compliance with the conditional acceptance letter. OTCR will issue a final acceptance letter upon demonstration of compliance with the requirements of this section.

(j) Operation. An ESS may not be operated until the job sign-off has been completed in accordance with subdivision (i) of this section.

(k) Registration and reporting requirements. All system registrations and notifications must be in a form and manner prescribed by DOB. Registration is not required for lead acid and nickel cadmium batteries used for emergency, standby, or uninterruptable power supply

(1) Where a new ESS is subject to the requirements of this section, building owners and property managers must register each new system with DOB prior to operation.

(2) Where an existing ESS would be subject to the requirements of this section, building owners and property managers must register such existing ESS with DOB within 3 years of the effective date of this section.

(3) Prior to decommissioning a registered ESS, DOB must be notified. All required permits must be obtained prior to decommissioning.