

NY-BEST

230 Washington Avenue Ext., Suite 101
Albany NY 12203
(518) 694-8474
www.ny-best.org



January 23, 2025

Submitted via email: dobrules@buildings.nyc.gov

TO: The New York City Department of Buildings
Office of the General Counsel
280 Broadway, 7th Floor
New York, NY 10007

RE: **Proposed Rules Governing Installation of Electrical Storage Systems**
Sections 101-19 and 3616-07 of Title 1 of the Rules of the City of New York

The New York Battery and Energy Storage Technology Consortium (“NY-BEST”) is pleased to submit comments for consideration in the above referenced proposed Rules in relation to the installation of energy storage systems (ESS), released by the New York City Department of Buildings (“DOB,” or “Department”) in December 2024.

While we are generally supportive of the Proposed Rules, we believe there are several areas that require clarification, and are particularly concerned that the requirements for Residential systems in one- and two-family dwellings are unduly burdensome, as further described below.

We greatly appreciate the Department’s consideration of our comments and recommendations. If you have any questions about these comments or need additional information, please contact us at 518-694-8474 or by email at info@ny-best.org. Thank you.

Respectfully submitted,

Handwritten signature of William Acker in black ink.

William Acker
Executive Director

Handwritten signature of Claudia Villar-Leeman in black ink.

Claudia Villar-Leeman
Sr. Director, Policy & Regulatory Affairs

INTRODUCTION

The New York Battery and Energy Storage Technology Consortium (NY-BEST) is a not-for-profit industry trade association with a mission to grow the energy storage industry in New York. We act as a voice of the energy storage industry for more than 175 member organizations on matters related to advanced batteries and energy storage technologies. Our membership includes global corporations, start-ups, project developers, leading research institutions and universities, and numerous companies involved in the electricity and transportation sectors.¹

NY-BEST and our members have been actively engaged in the implementation of the New York State Climate Leadership and Community Protection Act (CLCPA),² in line with New York City *PlaNYC* targets and programs supporting climate change mitigation and resiliency. We recognize the tremendous opportunity for energy storage to support both the City and States's climate, energy, and equity goals. We applaud DOB for the development of its comprehensive Proposed Rules, which codify the requirements and regulations that will ensure energy storage systems can continue to be installed safely and efficiently throughout NYC.

COMMENTS ON THE PROPOSED RULES

NY-BEST broadly supports the Proposed Rules, and specifically approves of the following components:

- The stated intention for Proposed Rule 101-19 to “make indoor installations viable and establish consistent design, approval and installation requirements, which will promote the safe installation of this necessary infrastructure.” (p3)
- The formal adoption of NFPA 855, *Standard for the Installation of Stationary Energy Storage Systems*, with modifications to ensure consistency with DOB requirements and the New York City Fire Code.
- The requirement for ESS components and systems to undergo rigorous testing and certification processes, including UL 9540A large-scale testing.
- The requirement for ESS to obtain an FDNY Certificate of Approval (COA).
- The elimination of site-specific review for ESS installations associated with one- and two-family dwellings, provided the equipment has received a COA and complies with NFPA 855.
- The requirement to obtain permits for construction work and electrical work.

¹ NY-BEST comments represent the interests of the organization as a whole and not the views of any single member. Our members have diverse interests and the organization's views are intended to be reflective of the energy storage industry collectively.

² New York State Climate Leadership and Community Protection Act, Chapter 106 of the Laws of 2019.
<https://www.nysenate.gov/legislation/bills/2019/s6599>.

- The requirement for inspection and commissioning to be performed in accordance with the relevant Codes or Rules prior to final acceptance.
- The establishment of registration requirements for new and existing ESS.

However, we offer the following concerns and recommendations:

1. As written, the requirements for Residential ESS in one- and two-family dwellings may be unduly burdensome.

Chapter 15 applies to ESS installations associated with one- or two-family dwellings, including indoor, outdoor, and garage installations. The Proposed Rules add section 15.14.1., which states, “Energy storage management system (ESMS) shall be required for ESS installations associated with one- and two- family dwelling units. Such energy storage management systems shall comply with 4.2.9.” The ESMS requirements of 4.2.9 include the following:

- *4.2.9.1 Where required by the equipment listing in accordance with 4.2.1 or the hazard mitigation analysis in accordance with 4.1.4, an approved ESMS shall be provided for monitoring operating conditions and maintaining voltages, currents, and temperatures within the manufacturer’s specifications.*
- *4.2.9.2 The ESMS shall electrically isolate the components of the ESS or place it in a safe condition if potentially hazardous temps or other hazardous conditions are detected.*
- *4.9.3 When required by the AHJ, visible annunciation shall be provided on the cabinet exterior or in an approved remote monitoring station(s) at the building’s fire command center and/or other approved location to indicate potentially hazard conditions associated with the ESS exist.*

Our understanding is that an ESMS is a higher level command-and-control system that interconnects multiple Battery Management Systems (BMS). This would not be an appropriate requirement for residential applications. NY-BEST believes this requirement will be challenging to comply with, indeed, the UL 9540 standard only requires ESMS for projects greater than 500 kWh. However, if the definitions put forth for ESMS and BMS in the Proposed Rules differ from industry’s understanding of ESMS and BMS, we recommend DOB clarify.

One of the biggest challenges is the requirement in 4.2.9.2. that the ESMS “shall electrically isolate the components of the ESS.” While residential systems should be required to have an E-stop on site, as well as the ability to isolate via software telling the system to shut down remotely, to our knowledge, no small systems on the market are able to automatically electrically isolate themselves via the opening of a breaker. The Department should clarify what would satisfy the requirements of the phrase “or place it in a safe condition” in 4.2.9.2.

NY-BEST recommends that DOB align these requirements with the FDNY Rule 608-01, which requires ESS of all sizes to have a Battery Management System (BMS) that allows for the system to be remotely monitored, as well as an E-stop on-site. In addition, NY-BEST recommends DOB clarify whether the adoption of Chapter 15 in the Proposed Rules obviate the need for the “Expedited Residential Installation Criteria” that were previously discussed for residential systems that have received the FDNY COA.

Finally, the Proposed Rule states in Section 15.7.1(2) that the aggregate rating amount shall not exceed 40kWh on exterior walls with a 1-hour fire rated barrier. Additional clarity should be provided on how this would relate to the requirement for a 2-hour rated separation on combustibles exterior walls, as required in Section 15.6.1(3), and whether a 1-hour fire rated barrier would still be needed for noncombustible exterior walls. Further, NY-BEST recommends that the Department provide additional clarity on how rooftop installations will be treated for Residential systems.

2. Clarification is needed regarding OTCR site-specific review.

By adopting installation standards via the Proposed Rules, ESS installations will no longer be considered an “Alternative Material.” As a result, the Proposed Rules state, “At the discretion of OTCR, an ESS that has received a COA from the FDNY may not require site specific equipment evaluation and approval.” While NY-BEST supports this change, we request that OTCR clarify how it will make that determination.

We recognize the need for the Department to retain the flexibility to change the site-specific review requirement over time, at their discretion. However, we urge the Department to publish a Bulletin or guidance document on how this determination will be made in the near-term. This could be done on product-specific basis (e.g. x product that has received the FDNY COA does not require site-specific review) and/or a location-specific basis (e.g. any products installed at a school requires site-specific review regardless of COA). Clarity and transparency will be critical to ensure that industry can plan permitting timelines accordingly.

Further, the shift away from OTCR site-specific review provides an opportunity to continue to streamline and eliminate overlap in review between DOB and FDNY. NY-BEST recommends that elements of the permitting review that are redundant between the two agencies be removed from the OTCR site-specific review, particularly for Large systems, which also require FDNY site-specific review. In addition, DOB should clarify that for projects that do not receive OTCR site-specific review, FDNY would be the AHJ for any site-specific items. This is particularly important to ensure DOB Plan Examiners that do not have the relevant technical expertise regarding ESS are not responsible for any site-specific technical approval.

Finally, Section 101-19(f)(3) of the Proposed Rules specifies that “peer review is required for site-specific ESS installations except as directed by DOB,” and that “(iii) OTCR will not issue a conditional acceptance letter for the ESS site-specific review...until a peer review report has been submitted...” However, for recent projects, OTCR has waived the Peer Review requirement for products that have provided an FDNY COA. NY-BEST urges the Department to clarify that for projects with an FDNY COA that are required to undergo site-specific OTCR review, peer review will not be required.

3. Improved collaboration between DOB and FDNY is required to ensure the successful implementation of the Proposed Rules.

a. FDNY Certificate of Approval (COA)

The Proposed Rule indicates several ways in which DOB may rely on decisions made within the FDNY COA to adjust standards and requirements. However, NY-BEST is concerned that miscommunications or misalignments between agencies could result in inconsistent or delayed decision-making. Based on the provisions in the Proposed Rule, it would stand to reason that the FDNY COA should include the following:

- *Clearance distances to exposures.* The Proposed Rules indicate default spacing requirements in several settings, but indicate that either AHJ approval or specifications within the product’s COA would result in alternative spacing requirements based on product testing. For example, the Proposed Rules state that:
 - Clearances in open parking garages can be reduced based on the COA (4.4.4.2.2),
 - Required separation distances for mobile systems “shall be permitted to be reduced when approved by the AHJ” (4.5.7.5.1.1), and
 - ESS in or one- and two-family dwellings require a “minimum of 3ft unless smaller separation distances are documented to be adequate as approved by the AHJ” (15.5).

However, each of the above provisions would require either OTCR site-specific review or, preferably, that the COA specify clearance distances for a variety of settings. Since the latter has not been FDNY’s practice to date, NY-BEST recommends DOB coordinate with FDNY to ensure these product- and location-specific clearance distances are included in each COA to reduce the need for OTCR site-specific review and to ensure transparency in the permitting process.

- *Adjustments to NFPA 855.* The Proposed Rules indicate ESS installations must comply with the applicable portions of NFPA 855, but our understanding is the COA should be able to adjust requirements on a product-specific basis. (e.g. 101-19(f)) NY-BEST recommends updating the language in the Proposed Rule to clarify this ability to adjust on a product-specific basis via the COA.

- *Visible annunciation.* The Proposed Rules indicate visible annunciation shall be provided “when required by the AHJ” (4.2.9.3). This requirement should be determined by the COA, particularly if there will not be an OTCR site-specific review. Otherwise, DOB should specify how they will determine if this is required.
- *Explosion control.* The Proposed Rules allow an exception to the requirement to provide explosion control complying with NFPA 68 or NFPA 69 for “ESS cabinets that have been designed to ensure no hazardous pressure waves...where approved by DOB” (4.12.1.2). NY-BEST recommends that this decision be made on a product-specific basis, based on relevant testing, and established in the FDNY COA.
- *Aggregate rating amounts.* The Proposed Rules state that the aggregate rating amount within a dwelling, garage, or accessory structure “may be modified by the conditions listed in FDNY COA” (15.7.1). Again, NY-BEST recommends ensuring that this is FDNY’s practice as part of the COA.

b. Registration and reporting

Under “Registration and reporting requirements” (101-19(k)), the Proposed Rule states, “All system registrations and notifications must be in a form and manner prescribed by DOB.” Notably, FDNY has also indicated their desire to have a complete database with all ESS installations in the five boroughs, particularly for small systems that do not require FDNY site-specific review. Therefore, NY-BEST recommends that DOB and FDNY coordinate to create a joint database accessible by both agencies. Further, the form and manner of registrations and notifications should be established via a Bulletin or guidance document jointly developed by both agencies.

4. Clarification is needed on Dedicated-Use Buildings.

Section 4.4.2.1 in the modified version of NFPA 855 proposes adding language on Dedicated-Use Buildings which “shall only be used for energy storage, energy generation, and other electrical grid-related operations.” NY-BEST recommends clarifying explicitly that the Electrical Houses (E-Houses) that incorporate accessory electrical equipment for energy storage projects would *not* qualify as Dedicated-Use Buildings to avoid any ambiguity.

5. Clarification is needed on Cybersecurity requirements.

Section 4.3.8.3 in the modified version of NFPA 855 proposes adding language on cybersecurity for “legally required battery systems that are connected to a communication network and have the capability to permit control of any portion of the legally required electrical system.” NY-BEST recommends that the Department provide a definition of “legally required battery system” to clarify when these requirements would be triggered. It would also be helpful for the Department to provide additional context on what prompted the inclusion of this section and the broader goal it strives to achieve.

6. Clarification is needed on treatment of systems that do not fall under the applicability of this Rule.

Section (a)(1) states that the Rule applies to “ESS that exceed the minimum aggregate capacities established in NFPA 855 when installed indoors.” NFPA 855 Table 1.3, “Threshold Quantities,” indicates that the minimum aggregate capacity for Lithium-Ion systems that are not installed in one- and two-family dwellings is 20kWh. This raises the question of how systems less than 20kWh will be treated. For example, if the Proposed Rules are adopted, what would be the permitting requirements for a 15kWh system installed in a non-residential location? Logically, systems smaller than the threshold should have an easier permitting pathway due to their size, but it is unclear if that would be the case if they are still treated as an “Alternative Material,” due to non-applicability under the Proposed Rule. NY-BEST urges the Department to clarify this gap.

In addition, DOB should clarify when battery-integrated devices will not be regulated as ESS installations. To this end, NY-BEST recommends adding a definition for “battery-powered appliances and equipment” to distinguish them from ESS installations, in line with proposed definitions for the 2027 International Fire Code (IFC) and International Residential Code (IRC). This definition could be written as follows:

Battery-powered appliances and equipment. An appliance incorporating detachable, integral, or separable battery pack(s) for its primary or secondary power source, which is not regulated as an energy storage system (ESS). Examples include battery-powered cooktops, ranges, and refrigerators.

This clarification is critical to the continued progress of ongoing electrification efforts in New York City. For example, the New York City Housing Authority (NYCHA) is planning to award a \$32 million, seven-year contract to design, prototype, test, and install 10,000 battery-powered stoves in apartments throughout the city to replace gas appliances. Clarifying the installation and listing requirements for these appliances as separate from ESS will be critical for the success of the program.

CONCLUSION

The adoption of the Proposed Rules comes at a critical time for energy storage development in New York City. NY-BEST anticipates a sharp increase in the number of proposed ESS projects seeking DOB approval over the next two years, driven in large part by New York State policy and incentives. Notably, the State recently approved nearly \$2 billion in incentives for energy storage projects in support of the 6 GW x 2030 statewide ESS goal, at least a third of which will be funneled to NYC projects.

Given the anticipated need for approximately 2 GW of energy storage capacity within the five boroughs by 2030,³ and given that only 31 MW of energy storage has been deployed in NYC to date, ~328 MW of energy storage must be installed in the city *annually* between 2025 and 2030. OTCR leadership has indicated an average intake of approximately 20 energy storage permit applications per year over the last several years; this is primed to increase eightfold, to over 160 projects per year, beginning in 2025.⁴

Thus, NY-BEST urges the City to support OTCR in streamlining permit review, including by addressing the above concerns and by funding additional staff lines, to ensure applications can be handled expeditiously, in line with City and State climate and equity mandates.

NY-BEST greatly appreciates the opportunity to provide this feedback and we are eager to continue to collaborate with the City to support the clean energy transition. Please do not hesitate to reach out with any questions or concerns; we would be happy to discuss further at your convenience.

³ New York State Department of Public Service (DPS) and the New York State Energy Research and Development Authority (NYSERDA). “New York 6 GW Energy Storage Roadmap: Policy Options for Continued Growth in Energy Storage,” updated March 15, 2024. Accessed online: <https://www.nyserda.ny.gov/-/media/Project/Nyserda/Files/Programs/Energy-Storage/Energy-Storage-Roadmap.pdf>.

⁴ According to a survey conducted by NY-BEST in January 2025, the eight most active developers in NYC collectively plan to submit at least 320 proposed energy storage projects >1 MW to NYC Authorities Having Jurisdiction (AHJs) over the next two years.