

January 23, 2025

Comment on Proposed NYC DOB Energy Storage Systems Rule

Dear NYC Department of Buildings,

I appreciate the effort to update the Energy Storage Systems (ESS) standards. I would like to provide feedback specifically regarding the aggregate size of ESS installations and how the rule addresses differences in system architecture, battery chemistry, and energy density. My key points are:

1. Clarification of System Size Categories

- The current language groups energy storage systems into broad categories, with limited distinction between lower-capacity residential systems and larger commercial/industrial ESS.
- I recommend a more detailed classification to reflect not only watt-hour capacity but also battery chemistry, module-level energy density, and thermal runaway characteristics.
- Currently, technology is separated into groups (Large, medium, small), this can create gray areas. We believe it is critical that it is clarified somehow in the DOB rule, and that the MAQ's implemented from the FDNY Certificate of Approval allows these to be superseded.

2. Energy Density Considerations

- The rule should explicitly address how system-level energy density influences siting requirements, spacing, and additional safety measures.
- Batteries with higher energy density (e.g., certain lithium-ion chemistries) may require a different approach to enclosure design, fire suppression, and ventilation than lower-density systems.
- Similar with the rule requirements, we do not distinguish between lithium-ion technologies (NMC vs LFP vs LTO, etc.). what we need to do is make the link between the FDNY COA and the acceptance or limitations of that equipment as stated by FDNY in their approval. Some technologies might not require as robust fire protection, but it will come down to their UL 9540A testing (or other destructive tests).

3. FDNY Certification and TM2 Approval

- The draft references certifications, but more explicit alignment with FDNY approvals (TM2 or similar processes) would be helpful. For instance, if the FDNY were to give an approval for the broad use and installation of one system, the DOB requirements should not necessarily be more restrictive in that case.
- A clear pathway for integrating FDNY requirements (including testing and emergency response protocols) into DOB's ESS permitting process will reduce confusion and expedite approval.

4. Comprehensive Risk Assessment

- ESS risk evaluations often consider cumulative fire load, thermal runaway potential, and system-level failure modes.
- The final rule should clarify how to perform a holistic risk assessment that accounts for multiple ESS components, varying chemistries within a single site, and potential cascading events.
- Additionally, it should reference the NFPA 855 standard on how holistic risk assessments are made (HMAs and BowTie Analysis).

By clarifying these points, the final regulation will better account for differences in battery chemistries, energy densities, and configurations—leading to more effective safety measures and a clearer roadmap for system developers seeking approval. Thank you for considering these recommendations.

Sincerely,

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