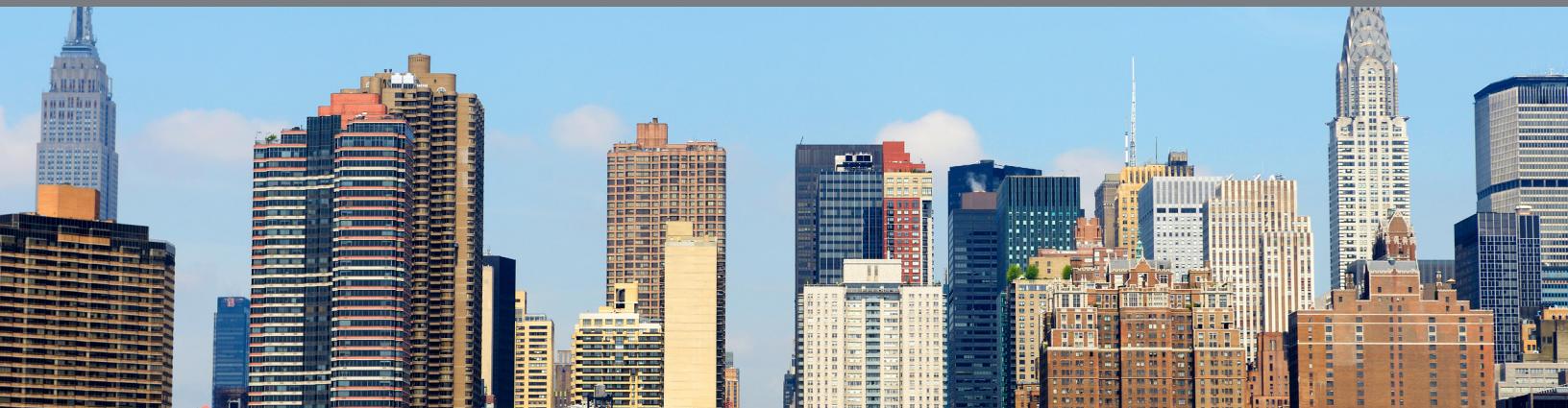


Energy Storage in New York City

Technology, Regulations, and Safety

A Technical Fact Sheet



Energy storage is critical to New York's clean energy future.

What Are Energy Storage Systems?

Energy storage is essential for creating a cleaner, more efficient, and resilient electric grid, which can ultimately reduce energy costs for New Yorkers. As New York State transitions to renewable energy technologies like wind and solar, energy storage can provide energy when the wind isn't blowing or the sun isn't shining. Most energy storage systems being deployed around the world today use lithium-ion batteries.

Energy storage systems:

- are a back-up energy source for homes and businesses
- can supply energy to a home, to a business, to a community, or to the electric grid
- can be integrated with wind and solar to enable our transition to a fully decarbonized electric system
- provide economic and environmental benefits to both customers and the electric grid
- helps deliver electricity to meet the demand of customers and increase grid reliability

RESIDENTIAL



Provides back-up power at homes and small businesses. Can offset utility bills by reducing usage during high-price periods.

COMMERCIAL



Provides economic benefits to system owners and the electric grid and reduces pollution for local customers.

BULK



Enables grid decarbonization, provides regional grid reliability, and increases electric system efficiency.



Mayor's Office of Climate & Environmental Justice



NYSERDA

Differences Between Energy Storage and E-bike Batteries

In recent years, there have been fires in New York caused by batteries that power electric bikes, scooters, and mopeds. Some of these batteries pass rigorous, standards-based safety testing (e.g., UL certification). However, there are others in circulation that have not passed testing, which are believed to be primarily responsible for the recent lithium-ion battery fires in New York City.

In contrast, all energy storage systems authorized for installation in New York must have undergone many stages of rigorous safety testing (e.g. UL certification), have required project design and equipment reviews and inspections by permitting authorities (e.g. FDNY), and are equipped with built-in safety precautions.

Energy Storage Systems: A Regulated Industry

Energy storage systems in New York City are thoroughly regulated, with oversight from the safety industry, federal, state, and local authorities. There are thousands of energy storage systems installed in New York State that have successfully met all applicable regulations.

Federal: Construction and safety code standards are developed collaboratively, involving years of consensus-building between technology experts and State and local code/building officials. The creation of codes and standards is led by federally approved organizations, including:

- International Code Council (ICC) — developed the International Fire Code (IFC) and revises it every three years
- National Fire Protection Association (NFPA) — developed the NFPA 855 standard for regulating energy storage systems
- Underwriters Laboratories (UL) Standards — developed the UL 9540 standard and the UL 9540A test for energy storage

New York City: New York City has additional codes and safety standards. All code, location, spacing, and other local requirements must be met. In addition to general code compliance, additional site-specific protections may be required to be addressed by operations and emergency procedures, and fire service coordination.

- The Fire Department of the City of New York (FDNY) has a separate process to approve individual stationary energy storage products for use in NYC. In addition to equipment approvals, FDNY has a site-specific approval process for each project.
- The NYC Fire Code has an entire section (608) devoted to Stationary Energy Storage Systems.
- The Office of Technical Certification and Research has a similar equipment approval process for the New York City Department of Buildings (DOB).
- NYC Department of City Planning (DCP) proposed updates to existing zoning regulations for energy storage systems as part of the City of Yes for Carbon Neutrality initiative.

NYSERDA's Role

NYSERDA's Clean Energy Siting team routinely delivers energy storage fire code and zoning trainings to local decision makers throughout the State.

NYSERDA's [Battery Energy Storage System Guidebook](#) contains information, tools, and step-by-step instructions to support municipalities managing battery energy storage system development in their communities, provides local officials in-depth details about the permitting and inspection process to ensure efficiency, transparency, and safety in their communities.

NYSERDA inspects all energy storage projects supported by its programs prior to commissioning with a detailed checklist to make sure the system has been installed to code and has followed the regulatory requirements.

NYC Mayor's Office of Climate & Environmental Justice's (MOCEJ) Role

MOCEJ collaborates with public, private, and community partners to ensure New York City energy storage development meets our equity and clean energy goals and our safety standards. MOCEJ communicates across agencies the importance of community engagement and public education to these goals.

The City's recent [PlaNYC: Getting Sustainability Done](#) outlines innovative ways that energy storage can support climate resiliency and community wellbeing and health as we transition away from polluting fossil fuels.