Energy Storage Systems

What New Yorkers Should Know

MODERNIZING
energy systems

REDUCING
pollution

ENSURING
resilience

Learn more about energy storage in New York State.

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Energy storage plays an important role in making sure New York State has an affordable and dependable energy future.

Energy storage is a smart and reliable technology that helps modernize New York's electric grid, helping to make the grid more flexible, efficient, and resilient. With thousands of energy storage sites already in place across the State, this exciting technology is playing an important role in making sure New York has affordable and dependable energy.

About energy storage:

Energy storage makes our power grid more affordable, more resilient, and more responsive. There are many types of battery energy storage systems, including ones that can be installed at home to be used for on-site backup power, larger systems for business use, and even larger systems that can be incorporated directly into our power grid. These technologies are common across New York State and the rest of the world, helping to modernize and future-proof our energy systems.

Why energy storage?

Energy storage helps everyday New Yorkers save money on electricity and keeps the power working when we need it most. This is especially true during peak demand events like hot summer days when electricity is most costly and we rely on air conditioning to stay safe and comfortable. For vulnerable groups, grid resilience can literally save lives.

Battery energy storage systems also help to balance the electricity network, providing necessary backup during power outages from severe weather events or accidents. This can prevent the need for more expensive upgrades to the power system, which helps keep electricity costs down over time.

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Energy storage systems can help to replace or lower the use of polluting peaker plants. Think of energy storage like a massive battery, and peaker plants like an expensive and massive gas-powered generator releasing emissions into the air. They are older power plants that are costly to maintain and powered by fossil fuels and only operate when New York State experiences "peaks" in energy demand. Using energy storage helps limit our use of these costly fossil fuel-based power plants, which in turn helps keep the air cleaner and people healthier—especially in communities that already face the biggest environmental risks to their health.

How does it work?

Energy storage systems, like large-scale batteries, are commonly charged by electricity drawn from the power grid during periods of low demand or extra capacity. That electricity is stored and held until it's needed, such as during peak usage times, grid disturbances, or outages. When demand increases, the stored energy can be discharged back into the grid instantaneously, helping to maintain a stable, reliable flow of electricity. By shifting when and how electricity supply and demand are balanced, storage helps reduce the need for costly grid upgrades, reduce stress on aging infrastructure, and improve the overall efficiency and reliability of the electric grid.

This is an exciting time for energy storage technology with helpful changes that continue to improve performance and safety.

New York State worked with top experts around the country to create and improve the regulations around energy storage. These regulations are some of the strictest in the United States and are supported by careful reviews and checks by outside experts. While there have been occasional safety issues with storage systems, these problems do not happen often. According to the Electric Power Research Institute's Battery Energy Storage Systems Failure Incident Database, the rate of incidents is extremely low—and falling—and it is important to understand that all electric infrastructure can catch on fire, making it critical to have the strictest safety standards no matter what.

Just to be safe, Governor Kathy Hochul announced the creation of an Inter-Agency Fire Safety Working Group (Working Group) in 2023 to ensure the safety and security of energy storage systems across the State. On July 25, 2025, New York officially adopted updated energy storage safety codes based on the Working Group's recommendations, further cementing the State's commitment to safe deployment.

It is important not to confuse e-bike batteries and their documented safety concerns with battery energy storage systems. While both are lithium-ion batteries, energy storage systems technology is highly regulated, has strong oversight, and is used under controlled manners—e-bike batteries fall under different codes and safety oversights altogether.

New York State works hard to make energy storage safe and effective, and each community can decide how best to use it for their needs, with help and support from the State.

Interested in energy storage and New York State's clean energy future?

To learn more, visit nyserda.ny.gov/storageforNYS
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