

Our **Energy Storage** Business



A Promising Future For Energy Storage

Technology offers flexibility, value in today's energy market

Meeting today's energy challenges is complicated. The power infrastructure must be able to balance supply and demand instantaneously while taking into account the impacts of intermittent renewable energy. Consumers are also looking for energy services and products that provide flexibility and value in the areas of renewable energy, grid reliability and peaking power.

As a global leader in battery energy storage, NextEra Energy Resources is helping meet these needs through technology, which is providing a promising way to store electrical energy so it can be available to meet demand whenever needed. While there are many energy storage technologies, NextEra Energy Resources has focused on the use of batteries as costs have declined, but is continuing to evaluate other storage technologies.

"We are very excited about energy storage and the potential growth ahead, including the opportunity it creates for low-cost, near-firm (close to providing continuous power) renewables. Several years ago, storage was expensive and had limited use cases. Since then, storage pricing has plummeted. Now, near-firm renewables are competitive with fossil and solar generation."

John Ketchum, President and CEO, NextEra Energy Resources

Energy storage delivers advantages to the power grid and our customers

What makes energy storage attractive is that it allows energy to be delivered instantly, in the required amount. By doing this, energy storage provides many advantages, such as improving the operation of the electrical grid, integrating renewable resources and helping investment decisions.

- » **Grid enhancement.** Energy storage can balance load on the power system grid by moving energy when demands are low to times when demands are high. The technology also allows for a seamless switch between power sources and protects equipment by controlling voltage and frequency.
- » **Renewable resources.** Energy storage fills in the gaps resulting from intermittent resources like wind and solar generation. That means operators can more easily ramp renewable energy up and down, reducing the need for load balancing services and rapid generation ramping.
- » **Electrical system investments.** By reducing the load on congested transmission and distribution systems, energy storage may defer expensive upgrades. In some cases, storage may also reduce new investment in conventional resources, such as adding generating plants to meet systemwide peak load.



Rush Springs Energy Center is the first battery energy storage system in Oklahoma and the first energy center of its kind in the region's Southwest Power Pool (SPP). This wind and storage hybrid project generates 125 megawatts (MW) of wind energy and has a 10-MW/20 MWh battery energy storage system.



NextEra Energy Resources' Wilmut Energy Center in Arizona combines 100 MW of solar energy and 30 MW of battery energy storage.

Projects require little land, provide many benefits

Energy storage projects do not require a large area for development, are scalable in size and can be located in many places. NextEra Energy Resources generally seeks to site a project as close as possible to existing electrical transmission or distribution infrastructure and often, close to an existing renewable project.

Other benefits of energy storage include no greenhouse gases or other air pollutants.

Interest in energy storage is growing

The growing interest in energy storage is being driven by a number of factors, including:

- » Reductions in technology costs.
- » The rapid development of intermittent renewable energy resources.
- » The evaluation of new policy initiatives by states.
- » Regulatory changes.

For example, the Federal Energy Regulatory Commission has mandated policy changes in the frequency regulation market that have helped spur the use of energy storage for this purpose. Certain markets are now encouraging utilities to use energy storage to manage the intermittent energy that flows into the grid and to supply the grid with energy during times of peak use.

Costs are expected to decline

While emerging technology costs tend to be higher and therefore less competitive during the early evolution phase, technological efficiencies, improved manufacturing productivity and economies of scale help lower cost over time. As batteries gain wider industry adoption, prices are expected to decrease further.

Energy storage is safe, reliable

Safety is always a top priority in NextEra Energy Resources' operations, and energy storage systems are no exception.

Our energy storage systems are safe and reliable. Overall, energy storage has been a part of the U.S. electric system since the 1930s. Today, it makes up approximately 2% of the nation's generation capacity, according to the Energy Storage Association. The safety record of the industry is similar to or better than other forms of power generation or distribution.

NextEra Energy Resources is experienced in energy storage

Our team of specialists has spent years researching energy storage technologies, applications and use cases. Today, NextEra Energy Resources has more than 500 MW of operational energy storage, including Rush Springs Energy Storage in Oklahoma and Minuteman Energy Storage in Massachusetts.

We also draw on the experience of our affiliate company, NextEra Analytics, that developed Optos, a comprehensive energy management program that uses artificial intelligence to monitor and improve battery energy storage performance in real time.

In addition to the growth of operational facilities, the company has the largest contract pipeline of battery energy storage projects in development across North America.

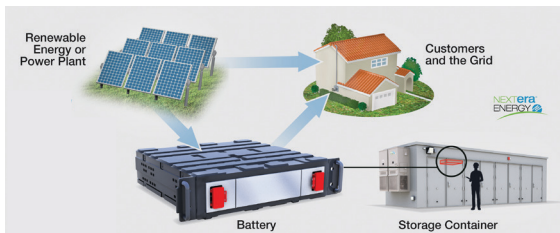


Batteries are placed into removable racks similar to a computer server. There are also monitoring, control and power conversion systems.



As demand for energy storage increases, energy storage projects continue to grow in size. At 115 MW/460 MWh, Blythe II is located in Riverside County, California, and went into service in early April 2021.

How energy storage systems work



- » A battery energy storage system can help balance the load on the power grid and deliver electricity to customers when it is most needed.
- » To achieve this balance, a battery system can be positioned at various points between a power plant (or renewable energy generator) and the homes and business that consume the electricity.
- » The battery system includes individual battery cells, collected into modules and housed in a specially-designed, climate-controlled storage container.
- » A computerized monitoring system provides information, including up-to-date weather forecasts, power prices, historical electrical use, the amount of charge remaining in the batteries and when to use the energy storage system.

Power when it's needed

- » When demand for energy is low, such as the middle of the day when people are at work or school or overnight when they're sleeping, the battery charges from the power plant and stores the electricity.



- » The battery discharges to the power grid when customer demand for energy is high, such as in the morning when people are getting ready for work or school, or in the early evening, when they're returning home, cooking dinner and watching TV.



NextEra Energy Resources has a proven reputation for excellence

As the world's largest generator of renewable energy from the wind and the sun, NextEra Energy Resources has earned a reputation for excellence. Our scale, size and scope of services allow us to offer innovative energy solutions to customers, and energy storage is a natural extension of our development business.

By working with NextEra Energy Resources, customers can realize the monetary benefits of energy storage while mitigating technology complexity and vendor risk. With our significant purchasing power, we can buy energy storage equipment at the lowest possible costs. With our best-in-class development skills, we can also build customized storage solutions to meet customers' unique requirements.

Energy storage has the potential to be a game changer for the energy industry, and NextEra Energy Resources is a leader in the market.

NextEraEnergyResources.com

NextEra Energy Resources, LLC | 700 Universe Boulevard | Juno Beach, Florida 33408

