

About energy storage

Energy storage enhances reliability, reduces costs, and increases grid resilience. In 2022, energy storage witnessed a record year with **4 GW/12 GWh** commissioned, representing an **80% increase** in total operating storage capacity.¹

U.S. energy storage facts



69,698

Energy storage jobs in 2021.¹



Production increase

Battery energy storage production capacity has steadily increased from just 600 MWh in 2010 to 71 GWh at the end of 2022.¹



\$5 billion

Total investments across the U.S. in 2022 to bolster economic growth.¹



9,564 MW

renewable energy capacity

U.S. battery storage increased from 47 MW in 2010 to 9,564 MW in Q1 of 2023.²

How is energy storage useful?



Reduces outages and enhances resilience



Reduces costs and saves money



Bolsters a sustainable electrical grid



Supports local economies

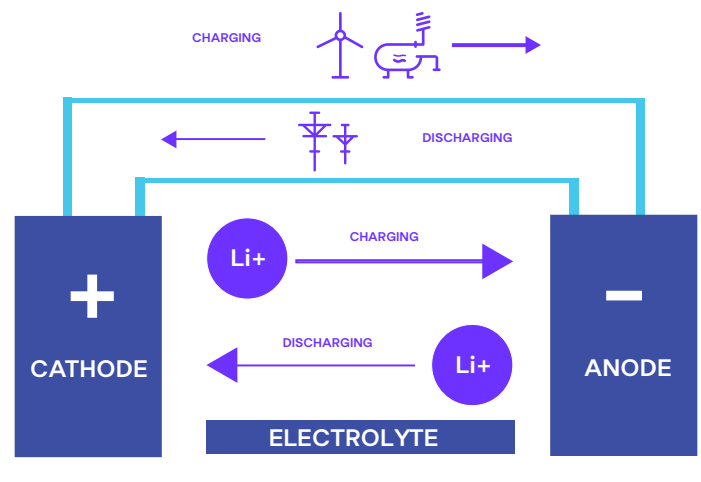
Energy storage technology captures energy to be used on demand and when needed most.

The electricity powering our homes and offices is generated by many energy sources and is delivered through our electric grid, depending on demand. **Energy storage technology safely stores this energy until it is needed, avoiding gaps in power distribution and therefore providing a constant stream of electricity.**

Deployment of energy storage is critical to integrating renewable energy on the nation's electric grid. By storing the energy generated by wind turbines or solar panels, clean energy sources can continue to power our grid during peak demand, or the times during the day when more electricity is needed.

How does energy storage work?

The most common electrochemical storage method is the **lithium-ion battery**. These are likely similar to the batteries that power your cell phones, laptops, or electric vehicles.



Energy storage systems are fuel-neutral. This means that they can capture and dispense electricity from oil, gas, coal, nuclear, geothermal, and EDP Renewables' wind and solar energy projects.



Lithium-ion cell



The battery is comprised of a positive cathode, a negative anode, a separator, an electrolyte, and positive and negative current collectors. When the battery is being charged by a power source, such as wind or solar power, lithium-ions move from the cathode, through the electrolyte and to the negative anode, storing energy for future use. When discharging power, lithium-ions are released by the anode and received by the cathode.

About us

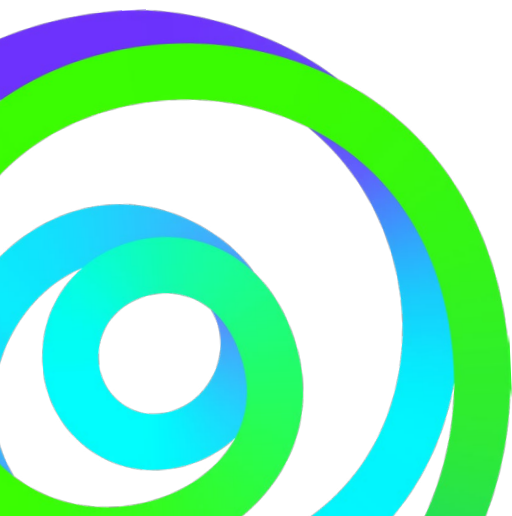
EDP Renewables North America LLC (EDPR NA), its affiliates, and its subsidiaries develop, construct, own, and operate wind farms, solar parks, and energy storage systems throughout North America. Headquartered in Houston, Texas, with 61 wind farms, 26 solar parks, and eight regional offices across North America, EDPR NA has developed more than 12,000 megawatts (MW) and operates more than 11,400 MW of onshore utility-scale renewable energy projects. With more than 1,000 employees, EDPR NA's highly qualified team has a proven capacity to execute projects across the continent.

EDPR NA is a wholly owned subsidiary of EDP Renewables (Euronext: EDPR), a global leader in the renewable energy sector. EDPR is the world's fourth-largest producer of wind and solar energy and is present in 28 markets in Europe, North America, South America, and Asia-Pacific. With headquarters in Madrid and leading regional offices in Houston, São Paulo, and Singapore, EDPR has a sound development portfolio of top-level assets and market-leading operating capacity in renewable energies. Particularly worthy of note are onshore wind, distributed and utility-scale solar, offshore wind (OW – through a 50/50 joint venture), and technologies to complement renewables such as storage and green hydrogen.

EDPR's employee-centered policies have received recognition such as Top Workplace 2023 in the USA, Top Employer 2023 in Europe (Spain, Italy, France, Romania, Greece, Portugal, and Poland) Colombia, and Brazil, and are also included in the Bloomberg Gender-Equality Index.

EDPR is a division of EDP (Euronext: EDP), a leader in the energy transition with a focus on decarbonization. Besides its strong presence in renewables (with EDPR and hydro operations), EDP has an integrated utility presence in Portugal, Spain, and Brazil including electricity networks, client solutions, and energy management. EDP – EDPR's main shareholder – has been listed on the Dow Jones Sustainability Index for 14 consecutive years, recently being named the most sustainable electricity company on the Index.

For more information, visit www.edprnorthamerica.com.



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1. American Clean Power Association, Annual Market Report, 2022.
2. American Clean Power Association, Renewable Energy Storage Facts, 2023.