About energy storage

Canada energy storage facts

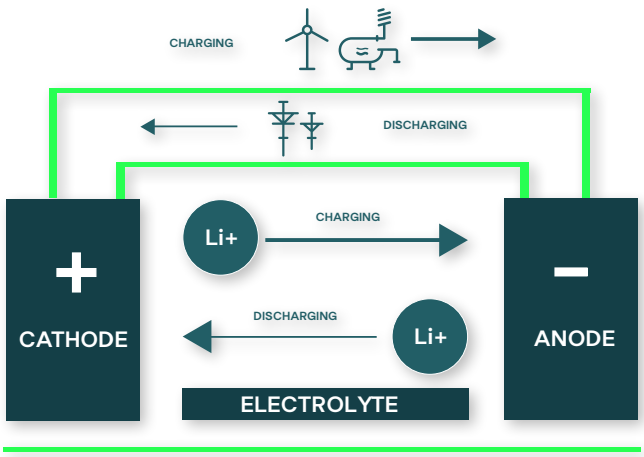
Energy storage enhances reliability, reduces costs, and increases grid resilience. Approximately **8–12 gigawatts of energy storage** generation would optimally support the net-zero transition of the Canadian electricity supply mix by 2035.[1]

How is energy storage useful?

- Reduces outages and enhances resilience
- Decreases costs and saves money
- Bolsters a sustainable electrical grid
- Supports local economies

How does energy storage work?

The most common electrochemical storage method is the **lithium-ion battery**. These are 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.

What is a 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.

Energy storage will contribute to powering Canada's journey to net-zero by 2050. [1]

Canada's energy transition

By the numbers

10.5% increase

Overall, the wind, solar, and energy storage sectors grew by **10.5%** in 2023. [1]

~ 7+ megawatts (MW) will be added

Forcasted to gain **more than 5 GW** of wind and **2 GW** of solar in the short term. [1]

Ranked 8th in the world

Canada ranked **8th in the world** for installed wind energy capacity at the end of 2022. [2]

19+ GW of clean energy

More than **19 GW** of installed utility-scale wind and solar energy. [1]

1.8+ GW of new generation

More than **1.8 GW of new generation** capacity in 2022, more than 2021's new capacity. [1]

~ 7% of electricity demand

Approximately **7% of Canada's 2020 electricity demand** was met by wind and solar energy in 2021. [3]

About us

EDP Renewables North America LLC (EDPR NA), its affiliates, and its subsidiaries develop, construct, own, and operate wind farms and solar parks throughout North America. Headquartered in Houston, Texas, with 58 wind farms, nine solar parks, and eight regional offices across North America, EDPR NA has developed more than 8,800 megawatts (MW) and operates more than 8,200 MW of onshore utility-scale renewable energy projects. With more than 950 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 fourth largest renewable energy producer worldwide with a presence in 28 markets across Europe, North America, South America, and Asia Pacific. EDPR has a robust development portfolio with first-class assets and a market-leading operational capability in renewables. These include wind onshore, utility scale and distributed solar, wind offshore (through its 50/50 JV - OW), and technologies complementary to renewables such as batteries and green hydrogen.

EDPR is a division of EDP (Euronext: EDP), a leader in the energy transition with a focus on decarbonization. EDP – EDPR's main shareholder – has been listed on the Dow Jones Index for 14 consecutive years, recently being named the most sustainable electricity company on the Index.

For more information, visit **www.edpr.com/north-america**.

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1. Canadian Renewable Energy Association, CanREA's 2050 Vision Report.
2. IRENA Renewable Electricity Capacity and Generation Statistics, 2021.
3. Canadian Renewable Energy Association, January 2022.