

Canadian energy storage projects





Overview

Who is energy storage Canada?

Energy Storage Canada is the only national voice for energy storage in Canada today. We focus exclusively on energy storage and speak for the entire industry because we represent the full value chain range of energy storage opportunities in our own markets and internationally.

When did energy storage start in Canada?

The first energy storage project in Canada, the Sir Adam Beck Pump Generating Station, came online in 1957. However, the next project did not come online until 2013. There are three main types of energy storage currently commercially available in Canada:.

What is the fastest growing energy storage technology in Canada?

BESS is the fastest growing energy storage technology in Canada and is also the dominant storage technology in terms of capacity and number of sites. All but four projects proposed to be commissioned by 2030 are battery storage, with two CAES and two PHS projects also proposed.

How big is Canada's energy storage capacity?

Global energy storage capacity was estimated to have reached 36,735MW by the end of 2022 and is forecasted to grow to 353,880MW by 2030. Canada had 138MW of capacity in 2022 and this is expected to rise to 296MW by 2030. Listed below are the five largest energy storage projects by capacity in Canada, according to GlobalData's power database.

What types of energy storage are available in Canada?

There are three main types of energy storage currently commercially available in Canada: Storage is playing an increasingly important role in the electricity system by improving grid reliability and power quality, and by complementing variable renewable energy sources (VRES) like wind and solar.



What is Canada's first battery energy storage facility?

TORONTO, May 7, 2025 – The Oneida Energy Storage Project (“Oneida”) has officially entered commercial operations, becoming the largest battery energy storage facility in operations in Canada, and one of the largest globally. Follow along for a behind-the-scenes look at building Canada’s first battery energy storage facility.



Canadian energy storage projects



Canadian Solar to Deliver 315 MWh DC of Battery Energy Storage

Under the agreements, e-STORAGE, Canadian Solar's subsidiary specializing in the design, manufacturing, and integration of battery energy storage systems, will deliver 188 ...

Oneida Energy Storage Project Commences ...

By integrating advanced energy storage solutions with meaningful Indigenous partnerships, this project enhances Ontario's clean energy grid ...



ONEIDA ENERGY STORAGE

Located in Haldimand County, Ontario, Oneida Energy Storage is a fully operational, 250 MW/1,000 MWh lithium-ion battery energy storage ...



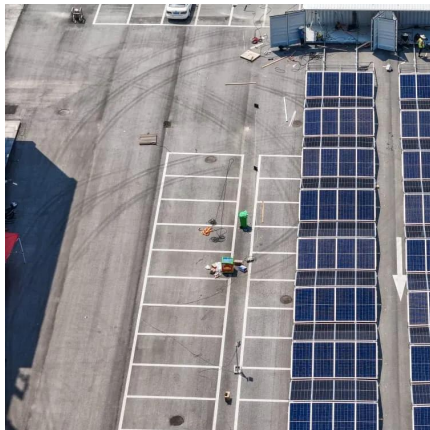
Recurrent Energy Secures \$183 Million in Project Financing and ...

KITCHENER, ON, March 18, 2025 /PRNewswire/ -- Recurrent Energy, a subsidiary of Canadian Solar Inc. ("Canadian Solar") (NASDAQ: CSIQ) and a global developer, owner, and operator ...



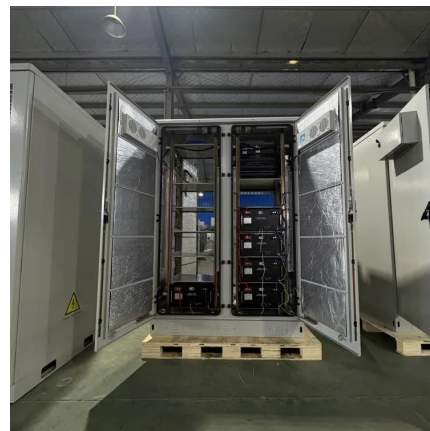
ONEIDA ENERGY STORAGE

Located in Haldimand County, Ontario, Oneida Energy Storage is a fully operational, 250 MW/1,000 MWh lithium-ion battery energy storage facility. It represents ...



Canadian Solar's e-STORAGE to supply battery systems to Aypa

Canadian Solar's e-STORAGE will supply 1.8GWh of battery energy storage systems (BESS) for two projects by Aypa Power in the US.



[Oneida Energy Storage Project Commences ...](#)

The Oneida Energy Storage Project has officially commenced commercial operations, becoming the largest grid-scale battery energy ...





Energy storage

This figure illustrates the geographic distribution and diversity of energy storage projects across Canada, with a noticeable concentration in Alberta, Ontario, and Quebec.

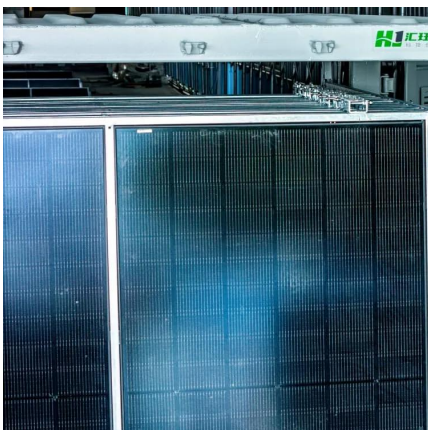


Market Snapshot: Energy storage in Canada may multiply by 2030

BESS is the fastest growing energy storage technology in Canada and is also the dominant storage technology in terms of capacity and number of sites. All but four projects ...

CANADA'S ENERGY STORAGE & MINING MICROGRIDS ...

RAGLAN MINE: BENEFITS OF STORAGE FOR OFF-GRID MINES This award-winning project set a new landmark in renewable energy penetration of diesel autonomous grids by coupling ...



Energy storage

This figure illustrates the geographic distribution and diversity of energy storage projects across Canada, with a noticeable concentration in ...



Energy Storage in Canada: Recent Developments in a Fast ...

A 2022 report titled Energy Storage: A Key Pathway to Net Zero in Canada, commissioned by Energy Storage Canada, identified the need for a minimum of 8 to 12GW of ...

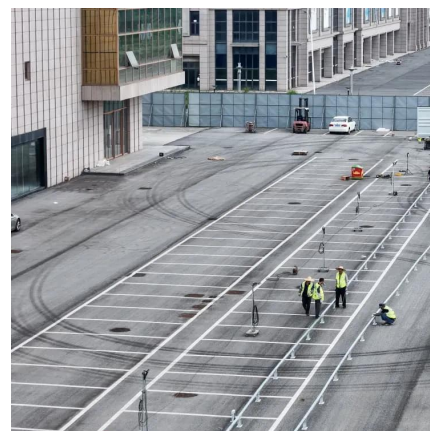


[Top five energy storage projects in Canada](#)

12 hours ago· Additionally, there are transformative projects for Canada, these cover critical mineral development, wind energy, critical infrastructure in the North, ports, and transportation ...

[Top five energy storage projects in Canada](#)

Listed below are the five largest energy storage projects by capacity in Canada, according to GlobalData's power database. GlobalData uses proprietary data and analytics to ...



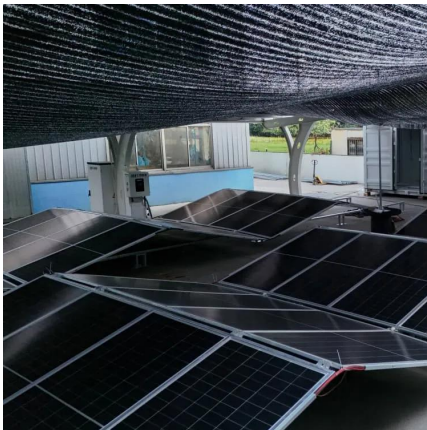
By the Numbers

Canada has only begun to scratch the surface of its vast and untapped wind and solar energy resources. At the end of 2024, we had 24 GW of wind energy, ...



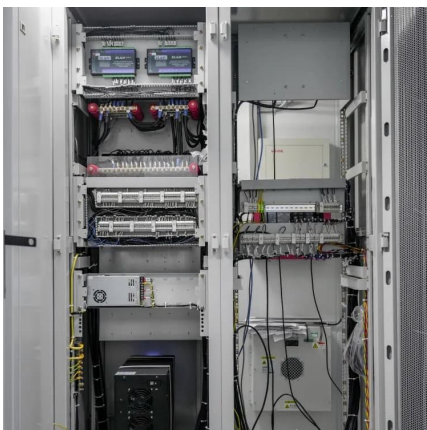
Oneida Energy Storage

Oneida Energy Storage facility is a 250 MW/1,000 MWh lithium-ion battery energy storage facility, representing the largest grid-scale battery energy storage ...



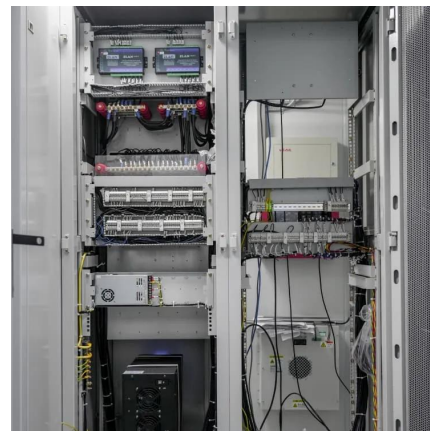
[A snapshot of Canada's energy storage market in 2023](#)

By Justin Rangooni, Executive Director, Energy Storage Canada The last 12 months have seen considerable development in Canada's energy storage market. The result ...



[Oneida Energy Storage Project Commences Commercial ...](#)

By integrating advanced energy storage solutions with meaningful Indigenous partnerships, this project enhances Ontario's clean energy grid and sets a global benchmark ...



Oneida Energy Storage

Oneida Energy Storage facility is a 250 MW/1,000 MWh lithium-ion battery energy storage facility, representing the largest grid-scale battery energy storage facility in Canada and within the top ...



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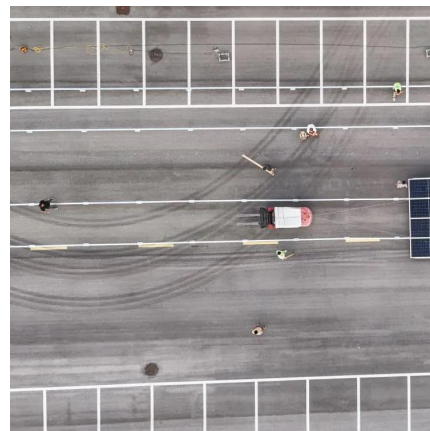


[Energy Storage in Canada: Recent Developments in a ...](#)

A 2022 report titled Energy Storage: A Key Pathway to Net Zero in Canada, commissioned by Energy Storage Canada, identified the need for a ...

Canadian Solar's e-STORAGE Launches SolBank 3.0 with ...

To date, e-STORAGE has successfully implemented over 3.3 GWh DC of battery energy storage solutions in various locations, including the United States, Canada, the United ...



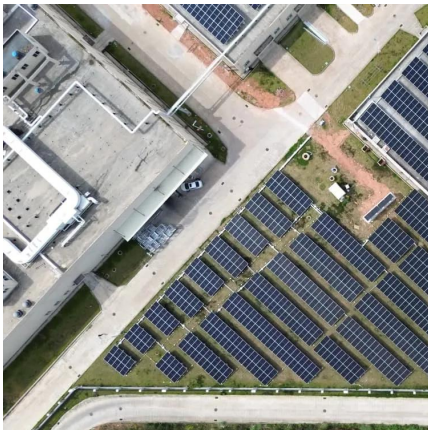
[Canadian Renewable Energy Project Map](#)

In addition to updated project information, the map includes a new battery energy storage layer, Indigenous renewable energy layer, and a solar energy potential layer.



Canadian Solar, Aypa Power make deal for 1.8GWh BESS projects

Canadian Solar secured battery supply agreements, long-term service agreements through e-Storage for two US BESS projects from Aypa Power.



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Major Projects Office of Canada: Initial Projects under Consideration

12 hours ago· Additionally, there are transformative projects for Canada, these cover critical mineral development, wind energy, critical infrastructure in the North, ports, and transportation ...



Axiom Infrastructure and Canadian Solar's

About Canadian Solar Inc. Canadian Solar was founded in 2001 in Canada and is one of the world's largest solar technology and renewable energy companies. It is a leading ...



Canadian solar projects \$7.3B-\$8.3B revenue for 2025 with focus ...

The company projects revenue growth for 2025, driven by increased energy storage shipments and strategic investments in domestic production capacity.

UTILITY ENERGY STORAGE - CSI Solar - Global

As a subsidiary of Canadian Solar, e-STORAGE is a leading company specializing in the design, manufacturing, and integration of battery energy storage systems for utility-scale ...



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