

Canada Renewable Energy - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

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Report description:

Canada Renewable Energy Market Analysis

The Canada Renewable Energy Market size in terms of installed base is expected to grow from 115.09 gigawatt in 2025 to 149.12 gigawatt by 2030, at a CAGR of 5.32% during the forecast period (2025-2030).

Hydro assets continue to underpin generation, yet wind and solar additions outpace legacy growth as carbon-pricing moves above CAD 170 per tonne. Falling levelized costs and an expanding pool of corporate power-purchase agreements bolster project bankability, while Indigenous equity structures lower financing hurdles for installations in remote regions. Green hydrogen export corridors widen the demand base beyond domestic electricity needs, and federal clean-technology incentives improve residential economics, nudging households toward distributed solar-plus-storage solutions.

Canada Renewable Energy Market Trends and Insights

Federal Carbon-Pricing Escalation

Escalating carbon fees lift fossil-fuel generation costs and sharpen the competitiveness of renewables, particularly as rates climb toward CAD 170 per tonne by 2030. Clean Electricity Regulations adopted in 2024 require zero-emission electricity by mid-century, compelling utilities to fast-track renewable capacity. Provinces diverge in compliance pace, but the price signal improves long-term revenue certainty for wind and solar developers, supporting merchant projects and lengthening contract

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tenors sought by institutional investors.

Indigenous Equity-Ownership Frameworks Unlocking Capital

The inaugural CAD 108.3 million equity loan from the Canada Infrastructure Bank to the Mesgi'g Ugnu's'n 2 wind farm illustrates how Indigenous participation unlocks financing while honoring stewardship rights. Subsequent BC Hydro procurement awarded nine majority-Indigenous projects worth CAD 6 billion, demonstrating policy alignment between reconciliation goals and energy expansion. Equity involvement accelerates permitting, lessens social-license risk, and channels revenue into local economies, creating a durable model for growth in remote resource corridors.

Transmission Congestion & Curtailment Risks

Rapid build-out has outpaced grid capacity in several corridors, prompting curtailment warnings from the Alberta Electric System Operator and driving Hydro-Quebec to earmark CAD 50 billion for 5,000 km of new lines. Bottlenecks raise project financing costs and shave revenues until upgrades materialize, tempering near-term expansion in high-resource zones.

Other drivers and restraints analyzed in the detailed report include:

Green-Hydrogen Export Corridor Initiatives / Surge in Corporate PPAs from Data-Centre & Mining Sectors / Critical-Minerals Supply-Chain Tightness for PV & Storage /

For complete list of drivers and restraints, kindly check the Table Of Contents.

Segment Analysis

Hydro plants supplied 76% of the Canada renewable energy market in 2024, reflecting a mature asset base and abundant river systems. Solar occupies a smaller share yet expands at a 9% CAGR as module prices fall and provinces roll out net-metering programs. Quebec plans to triple wind capacity by 2035, pairing variable resources with hydro reservoirs that act as natural storage. Western Prairie wind farms feed long-haul lines into Ontario and Quebec, though curtailment risk persists until planned upgrades near completion. Bioenergy remains a niche, serving industrial heat loads in forestry regions. Geothermal and tidal pilot projects advance slowly as developers test commercial viability amid high upfront costs.

Falling solar costs catalyze residential and commercial rooftop uptake, especially where clean-technology investment tax credits narrow payback periods. Hybrid projects combine PV, wind, and battery systems to flatten production curves, easing grid integration. Hydro refurbishments extend asset life and raise capacity, but environmental permitting for new dams remains stringent. Technology diversity lowers system risk and builds resilience against hydrological volatility driven by climate change.

The Canada Renewable Energy Market Report is Segmented by Type (Hydro Energy, Wind Energy (On-Shore and Off-Shore), Solar PV (Utility-Scale and Distributed), Bioenergy (Solid Biomass, Biogas, and Waste-To-Energy), Geothermal, and Ocean and Tidal), and End User (Residential, Commercial and Industrial, and Utilities). The Market Size and Forecasts are Provided in Terms of Installed Capacity (GW).

List of Companies Covered in this Report:

Hydro-Quebec / Brookfield Renewable Partners / Ontario Power Generation / TransAlta Renewables / BC Hydro / Canadian Solar Inc. / EDF Renewables / ENGIE SA / Siemens Gamesa Renewable Energy / Vestas Wind Systems / Acciona SA / EDP Renewables / Enel Green Power / Northland Power / Innergex Renewable Energy / Algonquin Power & Utilities / Pattern Energy Group / Capital

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Additional Benefits:

The market estimate (ME) sheet in Excel format /
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