

# How much of Canada's energy is renewable



IP65/IP55 OUTDOOR CABINET

IP54/55

OUTDOOR ENERGY STORAGE CABINET

OUTDOOR MODULE CABINET





## Overview

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Renewable energy in Canada represented 17.3% of the Total Energy Supply (TES) in 2020, following natural gas at 39.1% and oil at 32.7% of the TES. In 2020, Canada produced 435 terawatt hours (TWh) of electricity from renewable sources, representing 68% of its total . was the primary source, accounting for 60% of the electrici.

Canada is a world leader in the production and use of energy from renewable resources. In 2022, renewable energy sources provided 16.9 percent of Canada's total primary energy supply\*. Moving water is by far the most important form of renewable energy source in Canada, providing 61.7 percent of Canada's electricity generation in 2022. What percentage of Canada's energy is renewable?

Renewable energy in Canada represented 17.3% of the Total Energy Supply (TES) in 2020, following natural gas at 39.1% and oil at 32.7% of the TES. [ 2 ][ 3 ] In 2020, Canada produced 435 terawatt hours (TWh) of electricity from renewable sources, representing 68% of its total electricity generation.

What percentage of Canada's electricity is generated by wind?

The National Energy Board of Canada expects that by 2040, solar power will generate 1.2% of the country's electricity while wind will provide 9.5%. [ 28 ] Wind power represents 4.6% of Canada's total renewable energy capacity, with many optimal locations for wind energy across Canada and an installed wind capacity of 12,239 MW. [ 29 ].

How much electricity does Canada produce in 2022?

In 2022, Canada produced 639 terawatt hours of electricity. 70% of Canada's electricity comes from renewable sources and 82% from non-greenhouse gas (non-GHG) emitting sources such as solar, hydro, wind and nuclear power. Canada is the world's third largest producer of hydroelectricity. 62% of Canada's electricity comes from hydroelectric sources.

Should Canada increase the percentage of electricity produced by renewables?



Politicians have expressed interest in increasing the percentage of Canada's electricity generated by renewable methods. Ontario has created a subsidy to assist wind and solar power producers. [ 8 ].

What renewable resources does Canada have?

With its large landmass and diversified geography, Canada has an abundance of renewable resources that can be used to produce energy. These resources include moving water, wind, biomass, solar, geothermal, and ocean energy. Canada is a world leader in the production and use of energy from renewable resources.

What is Canada's renewable power?

Canada's Renewable Power focuses on renewable capacity changes projected over 2018-2023. This time frame reflects projects and retirements completed, or proposed, with the most recently available capacity data from 2017.



## How much of Canada's energy is renewable



### [Renewable Energy in Alberta: 16 Facts](#)

Alberta's Renewable Energy Goals Alberta has set ambitious goals to continue Canada's world-leading renewable energy development track record. A great example of the province's aspirations is its goal of having 30% renewable electricity generation by 2030 [12] via adding 1,000 MW of renewable capacity to the provincial grid.

### CER - Canada's Energy Future 2023: Energy Supply and ...

Canada's Energy Future 2023: Energy Supply and Demand Projections to 2050 - Data Supplement Canada's Energy Future series explores how possible energy futures might unfold for Canadians over the long term. Canada's Energy Future 2023 focuses on the challenge of achieving net-zero greenhouse gas emissions by 2050.



### [Renewable energy in Canada](#)

Summary Overview Environmental and clean technology sector Sources Provinces and territories Responsibilities of levels of government See also



Renewable energy in Canada represented 17.3% of the Total Energy Supply (TES) in 2020, following natural gas at 39.1% and oil at 32.7% of the TES. In 2020, Canada produced 435 terawatt hours (TWh) of electricity from renewable sources, representing 68% of its total electricity generation. Hydroelectric power was the primary source, accounting for 60% of the electricity...



### Energy Fact Book, 2024-2025: Clean power and low carbon fuels ...

Renewable energy. Biofuels and transportation. Key facts. In 2022, Canada produced 639 terawatt hours of electricity. 70% of Canada's electricity comes from renewable sources and ...



### [Renewable energy in Canada](#)

As of 2022, Canada was among the leading countries in renewable energy capacity worldwide, with 106 gigawatts installed. With more than two-thirds of electricity generated from renewable sources,

### CER - Canada's Energy Future 2021 Fact Sheet : Electricity

Canada's Energy Futures 2021 Fact Sheet: Electricity Click to enlarge Description: This graph shows the total additions and retirements of electric generation capacity by 2050 in the Evolving Policies Scenario and Current Policies Scenario, and breaks it down by fuel source.



### Canada Invests Over \$960-Million in Renewable Energy and Grid

The Honourable Seamus O'Regan Jr., Minister of Natural Resources, today launched a \$964-million program to support smart renewable energy and grid modernization projects that will lower emissions by investing in clean energy technologies, like wind, solar



### CER - Canada's Renewable Power

Canada's Renewable Power reviews the current status of renewable electricity in Canada in two key ways. First, we explore recent trends in both electricity capacity and generation for each province and territory in Canada.



### **The Main Electricity Sources in Canada by Province**

As reported by the National Energy Board (NEB) in 2017, two-thirds of the electricity sources in Canada come from renewable energy, with a combination of wind power, hydroelectric generation, solar power and even biomass energy. ...

### Top 15 Canadian Renewable Energy Companies

How much of Canada's energy is produced by renewable energy companies in Canada? The renewable energy companies in Canada have helped make Canada a global leader in renewable energy production. The amount of hydro capacity has been increasing slowly since 2006, reaching 81,836 megawatts in 2018.



Lower cost larger system

Verified Supplier

20Kwh  
30Kwh

### **Canada needs to accelerate its transition to renewable energy**

These plans emphasized the importance of renewable energy "in Canada's fight against climate change" and in "diversifying Canada's energy mix and promoting sustainable economic growth." There is now near-universal agreement - thanks to declining costs and fast deployment - about the importance of switching to renewable energy to mitigate the negative ...



### Powering Up: How Canada keeps the lights on , Canada's ...

Quebec is Canada's largest electricity producer in Canada, responsible for a third of the country's total electricity generation in 2022. Hydro-Quebec -- the provincial Crown corporation for electricity generation and distribution -- is a major power exporter.

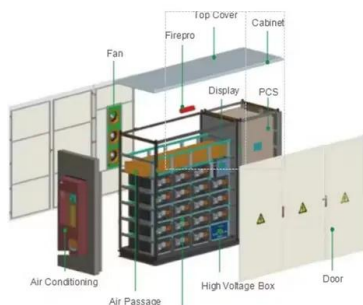


### ENERGY PROFILE Canada

ENERGY PROFILE Total Energy Supply (TES) 2016	2021
Non-renewable (TJ)	10 234 296 10 242 800
Renewable (TJ)	1 944 453 1 961 333
Total (TJ)	12 178 749 12 204 134
Renewable share (%)	16 16
Growth in TES 2016-21	2020-21
Non-renewable (%)	+0.1 +2.5

### Clean Electricity Regulations

In Canada, 84% of our electricity comes from renewable and non-emitting sources such as solar, hydro, nuclear, and wind power. The pace of renewable energy growth in Canada is increasing as the costs of renewables decline. Other highlights of Canada's



### CER - Energy Future 2023: Executive Summary

Canada's Energy Future 2023: Energy Supply and Demand Projections to 2050 (EF2023) is the latest long-term energy outlook from the Canada Energy Regulator (CER). The Canada's Energy Future series explores how possible ...



## ENERGY FACT BOOK

Clean energy industries such as renewable and nuclear electricity generation, biofuels production and carbon capture and storage facilities are contained within the definition of energy industries. Some energy-related industries (e.g. petroleum product wholesaler-distributors and coal product manufacturing) are excluded because of



### [Sources of pollution: electricity](#)

Canada's electricity generation mix is already one of the cleanest in the world. Currently, 66% of our electricity is from renewable sources such as hydroelectricity, wind and solar. When nuclear is included, this means over 80% of our electricity comes from sources

## Energy Mix

Explore global data on where our energy comes from, and how this is changing. How much of global energy comes from low-carbon sources? Around three-quarters of global greenhouse gas emissions come from the burning of fossil fuels for energy. 3 To reduce global emissions we need to shift our energy systems away from fossil fuels to low-carbon energy sources.



### [A Global Leader in Renewable Energy](#)

In the electricity sector, hydroelectricity is the largest renewable energy source in Canada, accounting for approximately 60 percent of Canada's electricity generation. Other renewable energy sources, such as biomass, wind, tidal and solar, contribute to increasing



## CER - Provincial and Territorial Energy Profiles - ...

Energy Production Crude Oil Canada produced 5.1 million barrels per day (MMb/d) of crude oil in 2023, an increase of 1.9% from 2022 (Figure 1). Canada was ranked as the fourth largest oil producer in the world in 2023. Footnote 1 ...



## [CER - Canada's Renewable Power](#)

In 2018, over two-thirds of Canada's electricity was generated from renewable sources. Wind and solar capacity is projected to continue growing over the medium term, but at a slower pace compared to capacity additions made ...

## [CER - Canada's Renewable Power](#)

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## Canada's farms integrate renewable energy production and ...

Renewable energy is primarily being used on farms Over three-quarters (75.7%) of farms in Canada that reported renewable energy production in 2021 used that energy on their farms. Renewable energy can be used to meet a variety of on-farm electrical and heating



### Energy and Society: The Benefits of Renewable Energy in Canada

With renewable energy, the cost of cleaning up environmental disasters is also much lower since renewable energy accidents do not cause as much damage as accidents in the fossil fuel industry [4]. Renewable energy also provides more job opportunities, both in the short term and the long term.



### [CER - Canada's Renewable Power - Alberta](#)

Source: CER Canada's Energy Future 2020 (EF2020) Description: This graph illustrates electricity generation from 2010 to 2018 in Alberta. In 2010, Alberta's total generation was 65 188 GW.h (7.3% renewable). In 2018, total generation was 83 277 GW.h (9.1



### Canada

Wind is Canada's second-largest source of renewable energy, with an installed capacity 13,588 MW in 2021, with Ontario (5,436 MW), Québec (3,882 MW), and Alberta (1,685 MW) the leading provinces. The total solar photovoltaic (PV) power installed capacity was over 2,600 MW in 2021.



### Renewable Energy

Renewable energy sources are growing quickly and will play a vital role in tackling climate change. Share of primary energy that comes from hydropowerThis interactive chart shows the share of primary energy that comes from hydropower.Note that this data is





### CER - Canada's Renewable Power - Ontario

Source: CER - Canada's Energy Future 2020 (EF2020) Description: This graph illustrates electricity generation from 2010 to 2018 in Ontario. In 2010, Ontario's total generation was 145 484 GW.h (24.9% renewable). In 2018, total generation was 157 243 GW.h



### **Geothermal energy**

Canada has vast geothermal energy resources that could be used as clean sources of power, relying primarily on binary cycle power plants to generate geothermal energy. The potential for geothermal development is distributed throughout Canada, but more data is required for much of Canada's land.

### **Renewable energy**

Renewable energy programs in Canada. Solar, wind, other renewable energy sources.  
Renewable energy programs in Canada. Skip to main content Skip to "About government"  
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