

Fact sheet: Clean electricity in Canada

August 2023

The federal government is developing new Clean Electricity Regulations. Along with [tens of billions](#) in federal funding available through investment tax credits, the new regulations are intended to help provinces and territories reach net zero emissions for the sector by 2035. This fact sheet outlines up-to-date information on clean electricity in Canada.

Clean electricity is critical to meeting Canada's climate targets

- Clean electricity will be critical to meeting Canada's climate targets—our emissions modelling has shown that [every conceivable pathway](#) to reaching the targets will require substantial electrification in virtually all sectors of the Canadian economy.
- Switching from fossil fuels to clean electricity alone can get Canada [37 per cent of the way](#) to its 2050 net zero emissions target.

Switching to clean electricity will save Canadians money

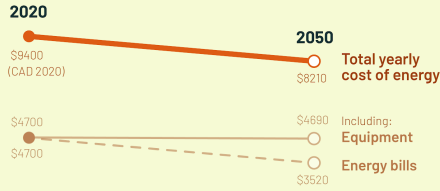
- [Our analysis](#) finds that, on average, Canadians will spend 12 per cent less on energy by 2050 than they do today, as they switch from fossil fuels to power their homes, vehicles and businesses with clean electricity.
- People will save at the gas pump and on home heating bills as they move to electric vehicles and heat pumps, which are significantly more energy efficient. These cost-savings occur despite households using more electricity at rates that rise gradually over time.

Switching to clean electricity will save Canadians money

Even as electricity rates gradually increase over time...



...Average household spending on energy would decrease by 12 per cent by 2050 as households switch to clean electricity.

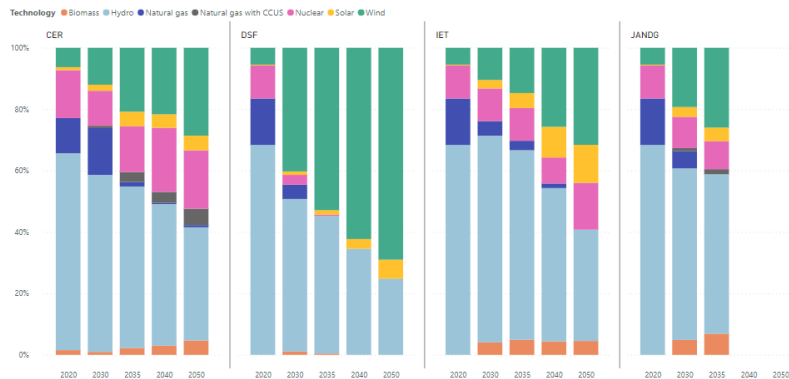


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Net zero electricity is achievable

- The Institute's [Big Switch](#) report found that there are multiple pathways to a net zero electricity system in Canada, and that many of them rely on technologies that are available today.
- The [Canada Energy Regulator's 2023 Energy Futures](#) report found that a net zero electricity grid by 2035 is part of a cost-effective economy-wide pathway to net zero.
- Canada's electricity grid has the advantage of already being [84 per cent non-emitting](#), compared to only [40 per cent in the United States](#).

Figure 1: Net-zero electricity generation in Canada by technology, modelled across four studies



Sources: CER (Canada Energy Regulator) 2023, DSF (David Suzuki Foundation) 2022, IET (Institut de l'Énergie Trottier) 2021, and Jaccard & Griffin (2021).

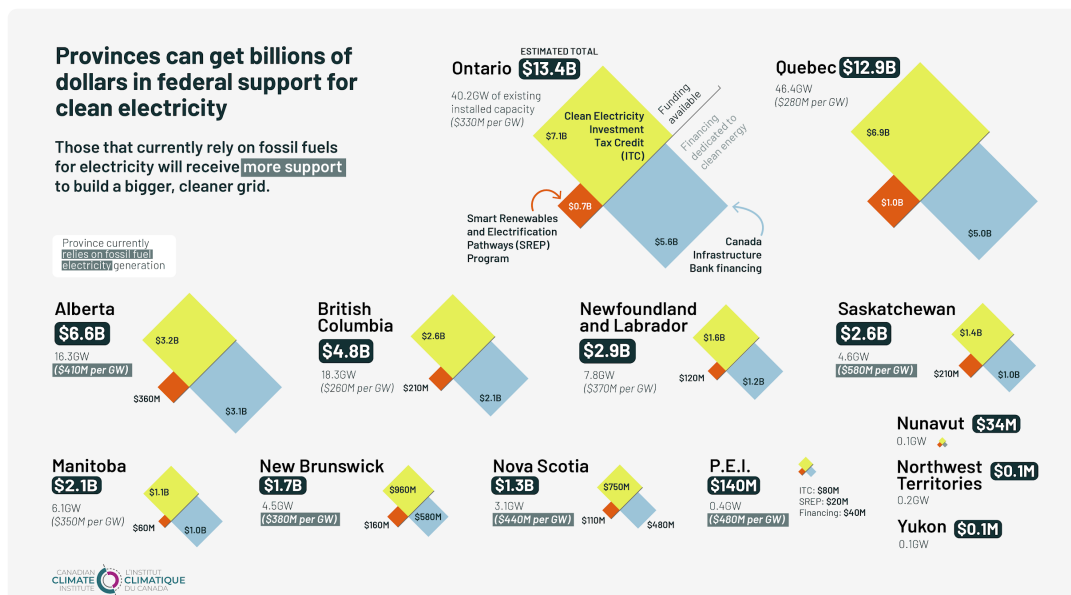


Clean electricity is needed to stay competitive with the U.S.

- Clean electricity is quickly becoming a [competitive necessity](#) to attract investment. In August 2023, [more than 30 businesses and organizations](#), including mining, labour, clean tech and Indigenous-run energy companies, stated they support making Canada's electricity grid net zero electricity by 2035.
- Canada's largest trading partner, the U.S., has already committed to net zero electricity by 2035 and is taking action with substantial incentives and newly proposed regulations. Canada is taking [a similar approach](#) and needs to keep pace to ensure economic competitiveness.

Federal dollars mean provinces can build cleaner grids for less money

- The most recent federal budget dedicated [more than \\$30 billion](#) to help provinces and territories upgrade and expand their electricity grids with clean electricity.
- Provinces that currently rely more on fossil fuels for electricity will receive more support to build a bigger, cleaner grid.



Renewables are the lowest-cost form of electricity generation

- The cost of renewable power has fallen dramatically over the last decade, making it the [cheapest source of new power](#), even after considering its intermittency.
- [Recent analysis](#) has shown that solar and wind are already competitive or cheaper than natural gas generation in Ontario and Alberta, with further significant cost declines expected in the future.
- In fact, Alberta has experienced a boom in renewable energy, and was previously set to see \$3.7 billion in renewables construction by 2023, with more than 4,500 jobs, according to the Business Renewable Centre.
- Alberta was on track to see \$3.7 billion worth of renewables construction by 2023, creating over 4,500 jobs. Clean Energy Canada's own analysis suggested that Alberta's clean energy sector will grow 10% a year out to 2050—the fastest of any province or territory. Between 2025 and 2050, there could be as many as 419,000 clean energy jobs added in the province.