



# Canada's Energy Future 2026

## Fact Sheets

### Results from the Canada Net-Zero Scenario

Canada Net-Zero was first introduced in 2023 and begins with a predetermined end point of net-zero greenhouse gas (GHG) emissions for Canada by 2050 exploring what a pathway to that end point could look like. It assumes the rest of the world also increases the pace of climate action, leading to somewhat lower global oil and natural gas demand than Current Measures (hence moderately lower oil and natural gas prices) and greater improvements in clean technology costs and efficiencies.

### Energy Demand

- Canada's end-use demand is 5% lower than 2023 in 2050 while real GDP grows by 50% over the same period.
- Total fossil fuel use declines by 40% in Canada Net-zero. In 2050, the share of total fossil fuel demand used for non-combustion purposes – such as petrochemical feedstocks, lubricants, and asphalt – rises to around 33%, compared to around 15% currently.
- End-use electricity demand increases 84% in Canada Net-zero, the highest among the four scenarios. By 2050, electricity is the largest end-use energy type, accounting for nearly 35 % of total demand compared to 18% today
- Canada Net-zero assumes that Canada adds 1.5 GW of data centre load by 2030, and 3.5 GW by 2050.

### Crude Oil

- By 2036, crude oil production peaks at 5.9 MMb/d compared to 5.5 MMb/d in 2024, before gradually declining to around 5 MMb/d by 2050.
- Oil sands production is 3.3 MMb/d by 2050, with 40 MT of carbon dioxide (CO<sub>2</sub>) stored with CCUS.
- This scenario assumes Brent crude oil prices rise from recent levels to \$70 USD (real) by 2030 before gradually declining to \$65 USD (real) per barrel by 2050.



## Natural Gas

- Natural gas production reaches 23 Bcf/d in 2036, followed by a modest decline to around 21 Bcf/d in 2050, with 4.25 Bcf/d (33 million tonnes per annum) of assumed LNG exports in 2050.
- This scenario assumes international natural gas prices (Henry Hub) remain flat at \$4.00 USD (real) per MMBtu in 2050.

## Electricity Capacity and Generation

- Electricity capacity more than doubles, increasing from around 160 GW in 2023 to 400 GW by 2050. Total power generation increases by over 700TWh by 2050 from 621TWh in 2023.
- Wind energy makes up the largest capacity additions, growing to 167 GW by 2050. Electricity generation by wind, which at 40 TWh accounted for 6.5% of generation in 2023, rises to 534 TWh or 40% of generation by 2050.
- By 2050, natural gas capacity without CCUS accounts for 8% of capacity, but only accounts for about 2% of generation.
- The total annual interprovincial electricity inflows (and outflows) more than double, rising from 55 TWh in 2023 to 140 TWh.

## GHG Emissions

- Net GHG emissions reach zero in 2050, which is not a projection, but a pre-determined constraint in this scenario.
- In 2050, remaining emissions in agriculture, oil and natural gas, buildings, industry, transportation, and waste, are offset by negative emissions from the electricity sector, nature-based solutions, direct air capture, and other carbon dioxide removal options.

## Emerging Technology

- Hydrogen makes up about 5% of the end-use demand mix by 2050, reaching 4.5 MT by 2050.
- Combined, total non-emitting or low-emissions hydrogen production reaches around 10 MT by 2050
- Total end-use bioenergy demand, including electricity and hydrogen produced from bioenergy, increases by 150% by 2050. The deployment of bioenergy with CCUS in power generation and hydrogen production provides negative emissions that help offset residual emissions from other sectors.