Canada Energy Regulator | Régie de l'énergie du Canada

Canada's Energy Future 2026

Fact Sheets

Results from the Lower Scenario

This scenario explores how Canada's energy system might evolve if key drivers – Canadian GDP growth, LNG exports and data-centre electricity demand, and global oil and gas prices – fall below the levels assumed in the Current Measures scenario, the traditional baseline scenario used in this report.

Energy Demand

- Canada's end-use demand rises 1% from 2023 to 2050 while real GDP grows by more than 37%.
- Hydrocarbon use declines slightly, with total end-use fossil fuel demand 7% lower than 2023 levels by 2050. In 2050, the share of total fossil fuel demand used for non-combustion purposes – such as petrochemical feedstocks, lubricants, and asphalt – rises to 22%, compared to around 15% currently.
- Canadian end-use electricity demand grows slower than the other scenarios but still increases by 26% from 2023 to 2050.

Crude Oil

- By 2030, crude oil production in 2030 rises to 5.7 MMb/d from 5.5 MMb/d in 2024. Driven by low prices, production gradually declines to 5.2 MMb/d by 2050, which is close to 2022 production levels.
- Oil sands production makes up the majority of production, with production remaining near 2024 levels by 2050, reaching 3.7 MMb/d.
- This scenario assumes Brent crude oil prices decline to $55 USD (real) by 2030 and then remain flat thereafter.

Canada

Natural Gas

- Overall, total natural gas production is about 15% higher in 2050, reaching around 21 Bcf/d, compared to 18.3 Bcf/d in 2024.
- This scenario assumes international natural gas prices (Henry Hub) fall to around $3.75 USD (real) per MMBtu in 2050.

Electricity Capacity and Generation

- Electricity capacity increases from around 160 GW in 2023 to 270 GW in 2050.
- Wind energy makes up the largest capacity additions and growth in generation, which at 40 TWh accounted for 6.5% of generation in 2023, growing to 202 TWh and 23% by 2050.
- By 2050, natural gas capacity without CCUS remains near current levels at 12% of total capacity with generation shares at 4%.
- Total annual interprovincial electricity inflows (and outflows) more than double, rising from 55 TWh in 2023 to 133 TWh by 2050.

GHG Emissions

- By 2050, GHG emissions are 35% lower than 2005 levels.
- From 2023 to 2050, the largest declines come from oil and gas (-50 MT), transportation (-41 MT), and electricity (-39 MT). The electricity sector stands out, with over 90% lower emissions by 2050 compared to the 2005 benchmark.

Emerging Technology

- Hydrogen remains a niche technology, mostly in the industrial sector, with export-focused production rising after 2030.
- Combined, total non-emitting or low-emissions hydrogen production reaches over 2.5 MT by 2050.
- Total end-use bioenergy demand, including electricity and hydrogen produced from bioenergy, increases by 10% by 2050.