Canada Energy Regulator | Régie de l'énergie du Canada

Canada's Energy Future 2026

Fact Sheets

Results from the Current Measures Scenario

Current Measures serves as a traditional baseline scenario, showing how Canada's energy system might evolve under existing policies, moderate economic growth and steady technological progress. While often used as a reference point, it is not a prediction or the most likely scenario as we do not assign probabilities to any of our scenarios. Instead, its value comes from how it can be used as a comparison with other scenarios, helping illustrate how different assumptions shape Canada's energy future.

Energy Demand

- Canada's end-use demand rises 11% from 2023 to 2050 while real GDP grows by more than 50%.
- Hydrocarbon use remains relatively stable, with total end-use fossil fuel demand 1% higher 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 23%, compared to around 15% currently.
- Canadian electricity demand grows significantly, with end-use electricity increasing by 44% from 2023 to 2050. By 2050, the share of electricity in the end-use mix rises, accounting for nearly 23% of demand compared to 18% today.
- This scenario assumes Canada adds 1.5 GW of data centre load by 2030, and 3.5 GW by 2050.

Crude Oil

- By 2030, crude oil production rises to 5.8 million barrels per day (MMb/d) from 5.5 MMb/d in 2024.
- Production peaks at 6.1 MMb/d by 2042 before leveling off to 5.9 MMb/d by 2050.
- Oil sands leads Canadian production, with oil sands output continuing to grow to 4.1 MMb/d by 2050.
- This scenario assumes Brent crude oil prices rise from recent levels to $75 USD (real) per barrel by 2030 and then remain flat in real terms thereafter.

Canada

Natural Gas

- Natural gas production reaches 27 Bcf/d, with 6.1 Bcf/d (48 million tonnes per annum) of assumed LNG exports, making up 25% of total production by 2050.
- This scenario assumes international natural gas prices (Henry Hub) rise to around $5.25 USD (real) per MMBtu in 2050.
- Tight gas becomes the dominant source. After growing from 28% of production in 2005 to 68% in 2024, it grows to 85% in 2035 and 90% in 2050.
- Overall, total natural gas production in 2050 is nearly 50% higher than in 2024.

Electricity Capacity and Generation

- Electricity capacity increases from around 160 GW in 2023 to 310 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 277 TWh and 28% by 2050.
- By 2050, natural gas capacity without CCUS accounts for 11% of capacity, but only accounts for about 3% of generation.
- Total annual interprovincial electricity inflows (and outflows) more than double, rising from 55 TWh in 2023 to 137 TWh by 2050.

GHG Emissions

- By 2050, GHG emissions are 28% lower than the 2005 benchmark year, and 17% lower than 2023 levels.
- From 2023 to 2050, the largest declines come from electricity (-38 MT), oil and gas (-32 MT), and transportation (-30 MT). The electricity sector stands out, with over 90% lower emissions by 2050 compared to the 2005 baseline.

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 32% by 2050, with forest and HWP residues, livestock residues, urban wastes, and energy crops making up most of the growth.