

Natural Resources
Canada

Ressources naturelles
Canada

Energy Fact Book

Spring 2026 Edition

Canada



Natural Resources
Canada

Ressources naturelles
Canada

Energy Fact Book

Spring 2026 Edition

Canada

Aussi disponible en français sous le titre : Cahier d'information sur l'énergie, Édition printemps 2026

Information contained in this publication or product may be reproduced, in part or in whole, and by any means, for personal or public non-commercial purposes, without charge or further permission, unless otherwise specified.

You are asked to:

- Exercise due diligence in ensuring the accuracy of the materials reproduced.
- Indicate the complete title of the materials reproduced and the name of the author organization.
- Indicate that the reproduction is a copy of an official work that is published by Natural Resources Canada (NRCan) and that the reproduction has not been produced in affiliation with, or with the endorsement of, NRCan.

Commercial reproduction and distribution is prohibited except with written permission from NRCan.

For more information, contact NRCan at copyright-droitdauteur@nrcan-rncan.gc.ca.

Cat. No. M136-1E (Print) M136-1E-PDF (online)

ISSN 2370-3105

ISSN 2370-5027

© His Majesty the King in Right of Canada, as represented by the Minister of Natural Resources, 2026

Preface

The Energy Fact Book provides **reliable, up-to-date statistics and analysis** to support evidence-based dialogue on Canada's energy sector. The new spring and fall release schedule will help ensure the publication continues to reflect the latest data and developments across Canada's energy system.

Designed for a wide audience—including government, industry, academia, educators, media and the public—**this resource aims to bridge technical depth with broad accessibility.**

The contents of this publication span a wide array of indicators including energy production and consumption, prices and trade; as well as economic contributions, technology trends and environmental impacts—curated to provide a holistic overview of the sector.

The Energy Fact Book draws on the expertise of Natural Resources Canada, Statistics Canada, the Canada Energy Regulator and Environment and Climate Change Canada, and **benefits from ongoing collaboration across federal and provincial agencies**, under the scope of the **Canadian Centre for Energy Information.**

Refer to the annexes for definitions, methodology, and notes on data availability and consistency. For questions and comments, contact **energyfacts-faitsenergetiques@nrcan-rncan.gc.ca**.

Contents

Introduction	vi
SECTION 1	1
Key Energy, Economic and Environmental Indicators	
SECTION 2	23
Investment	
SECTION 3	39
Skills, Diversity and Community	
SECTION 4	47
Energy Efficiency	
SECTION 5	59
Clean Power and Low Carbon Fuels	
SECTION 6	103
Oil, Natural Gas and Coal	
Annex 1: Notes on methodology	146
Annex 2: Units and conversion factors	147
Annex 3: Abbreviations	150
Annex 4: Sources	153

Introduction

Canada is an energy nation. From hydroelectricity to the oil sands to emerging renewables, our vast and varied natural resources have helped build a resilient economy, connect our communities, and support energy security at home and abroad.

Today, the energy landscape is evolving. Canada is innovating in how energy is produced, delivered, and used. Renewable electricity continues to grow, led by wind and solar. Oil and gas remain foundational to the mix, meeting energy needs at home and abroad, supported by efficiency gains and operational advancements in production and use. At the same time, clean fuels are emerging and technologies such as carbon capture, energy storage, and electrification are reshaping industrial processes and transportation.

These changes are part of a global energy transformation—driven by technological change, shifting demand, affordability needs, and the imperative to maintain international competitiveness. With its geography, skilled workforce, and commitment to research, Canada is positioned to lead in this transformation, —leveraging regional strengths, priorities, energy mixes, and economic pathways.

Reliable data are essential to understanding these developments and seizing the opportunities they create for innovation, investment, and long-term economic growth. By presenting key facts and indicators on Canada's energy system in a clear and accessible format, the Energy Fact Book has remained a trusted reference for over fifteen years.



Section 2: **Investment**

Capital expenditures

Energy infrastructure and major projects

FDI and investment abroad

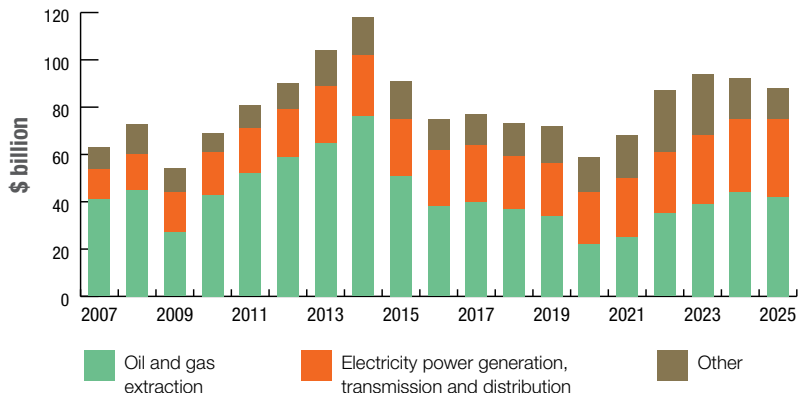
Energy assets

RD&D

Environmental protection expenditures

Capital Expenditures

Capital expenditures* in the energy industry, 2007–2025

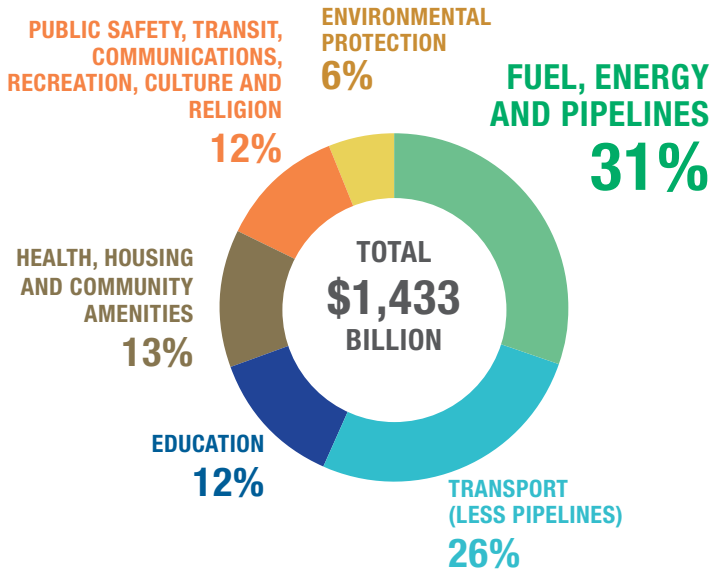


- Capital expenditures in Canada's energy sector totaled **\$89 billion** in 2025, a decrease of 24% from a peak in 2014.
- After reaching an eleven year low of **\$59 billion** in 2020, investment has rebounded by **51%**.
- Oil and gas extraction was the largest area of energy sector capital expenditure at **\$42 billion** in 2025, followed by electrical power generation and distribution (\$34 billion).

*Excludes residential expenditures and intellectual property investments such as exploration expenses. Includes investments in renewable electricity, does not capture other forms of renewable energy.

Canada's Energy Infrastructure

Fuel, energy and pipeline infrastructure made up the largest proportion of Canada's infrastructure at **31%** of net stock in 2025.



Statistics Canada defines infrastructure as:

“the physical structures and systems that support the production of goods and services and their delivery to and consumption by governments, businesses and citizens.”

Fuel, energy and pipeline infrastructure includes electric power infrastructure like wind and solar, hydro, nuclear, and thermal generation, power transmission and distribution lines and oil and gas pipelines.

FUEL, ENERGY AND PIPELINE INFRASTRUCTURE INVESTMENT AND OPERATIONS

supported
169.5 k jobs

generated **\$15.7 billion**
in employment income

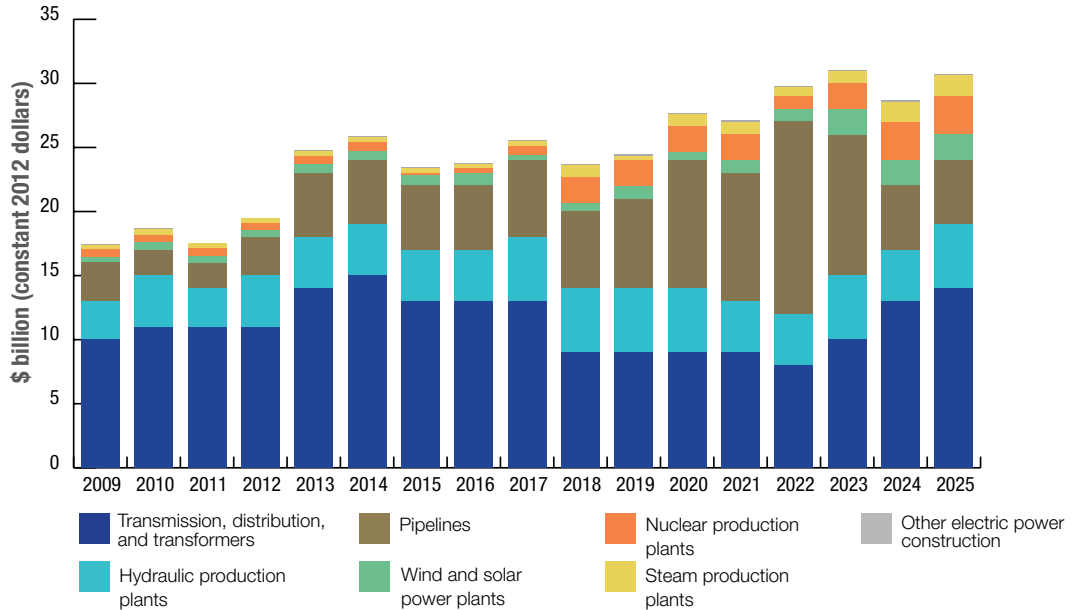
and **\$31.4 billion**
in GDP
in 2025

(direct and indirect contributions).



Public and private investment in fuel, energy and pipeline infrastructure in 2025 was **\$41.8 billion** (nominal).

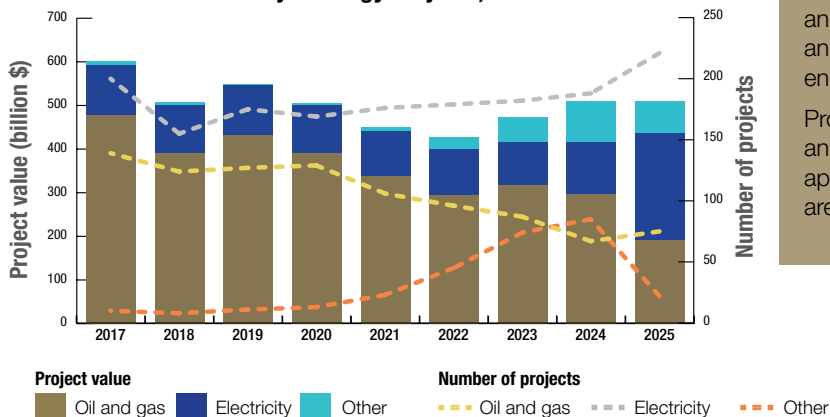
Public and private investment in fuel, energy and pipeline infrastructure, 2009–2025



Canada's Major Energy Projects

- In 2025, there were 205 planned (announced, under review, or approved) energy projects worth **\$378B**, and 113 energy projects under construction worth **\$132B**.
- Most major projects are in the electricity sector (221), which now represents the largest share of total project value (\$243B), surpassing the oil and gas sector.
- There were **186 clean technology projects** valued at **\$240B**.

Trends in Major Energy Projects, 2017–2025



Natural Resources Canada's Major Projects Inventory captures information on major natural resource projects in Canada that are either currently under construction or planned in the next 10 years.

Minimum capital thresholds for inclusion are: **\$50 million** for oil and gas, **\$20 million** for electricity, and **\$10 million** for other clean energy or technology projects.

Projects that are either announced, under review, approved and under construction are included.

CLEAN TECHNOLOGY PROJECT TRENDS 2018-2025

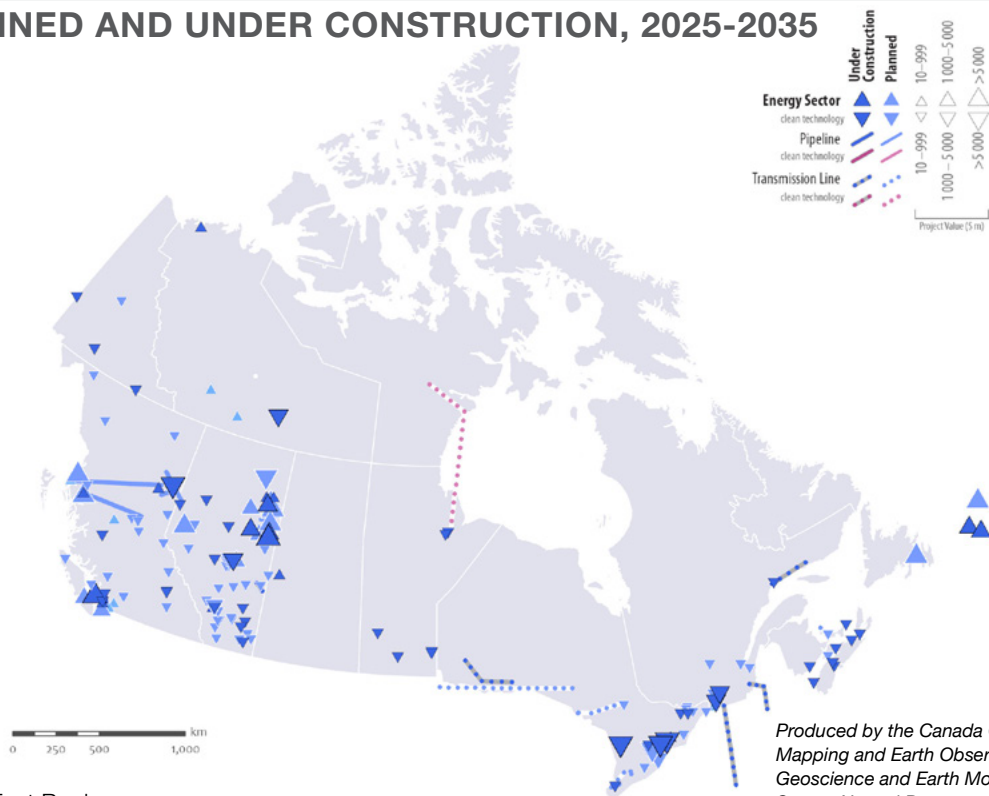
	2018	2019	2020	2021	2022	2023	2024	2025
Total Clean Tech projects	144 (\$109.5B)	151 (\$99.3B)	159 (\$99.4B)	178 (\$104B)	197 (\$118B)	233 (\$157.4B)	215 (\$194.2B)	186 (\$239.9B)
Hydro	65 (\$48.2B)	70 (\$50.0B)	61 (\$52.0B)	58 (\$39.2B)	63 (\$44.8B)	78 (\$37.4B)	58 (\$30.4B)	46 (\$37.7B)
Wind	27 (\$9.1B)	31 (\$9.4B)	36 (\$8.3B)	41 (\$14.6B)	35 (\$13.4B)	32 (\$12.4B)	33 (\$26.8B)	34 (\$23.3B)
Biomass/Biofuels	33 (\$6.4B)	32 (\$3.0B)	29 (\$4.6B)	31 (\$8.0B)	35 (\$9.4B)	47 (\$14.3B)	41 (\$12.6B)	26 (\$7.1B)
Solar	7 (\$0.9B)	6 (\$0.7B)	13 (\$1.4B)	22 (\$2.2B)	30 (\$3.0B)	31 (\$6.2B)	36 (\$8.8B)	31 (\$6.4B)
Nuclear	5 (\$28.5B)	5 (\$28.5B)	3 (\$26.1B)	4 (\$27.4B)	3 (\$26.1B)	2 (\$25.8B)	3 (\$51.8B)	5 (\$87.9B)
Carbon Capture and Storage	3 (\$16.3B)	2 (\$7.2B)	1 (\$6.0B)	2 (\$11.3B)	6 (\$15.5B)	9 (\$38.3B)	8 (\$38.3B)	6 (\$19.4B)
Geothermal	1 (\$0.0B)	2 (\$0.2B)	3 (\$0.3B)	5 (\$0.4B)	4 (\$0.4B)	4 (\$0.4B)	4 (\$0.4B)	2 (\$0.2B)
Tidal	0 (\$0.0B)	1 (\$0.1B)	6 (\$0.3B)	6 (\$0.3B)	7 (\$0.4B)	7 (\$0.4B)	4 (\$0.2B)	2 (\$0.05B)
Multiple¹	0 (\$0.0B)	0 (\$0.0B)	0 (\$0.0B)	1 (\$0.03B)	1 (\$0.03B)	1 (\$0.03B)	1 (\$0.03B)	6 (\$8.3B)
Other²	3 (\$0.1B)	2 (\$0.1B)	7 (\$0.4B)	8 (\$0.5B)	13 (\$5.3B)	22 (\$22.1B)	25 (\$23.8B)	28 (\$49.5B)

¹ "Multiple" includes developments such as the Haida Gwaii Clean Energy Project, a multi-phased project consisting of hydro and solar sites.

² "Other" includes initiatives such as hydrogen production, battery storage, and industrial decarbonization projects.

MAJOR ENERGY PROJECTS

PLANNED AND UNDER CONSTRUCTION, 2025-2035

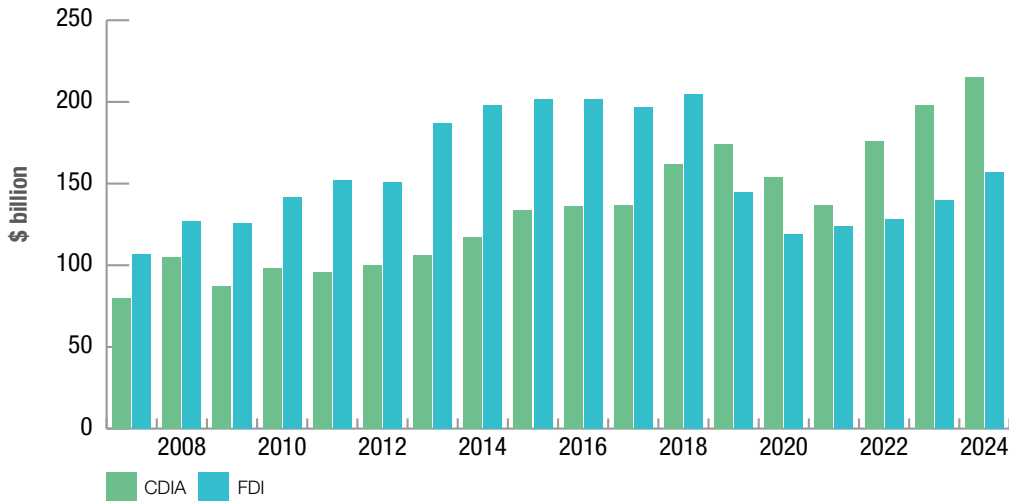


Produced by the Canada Centre for Mapping and Earth Observation, Geoscience and Earth Monitoring Sector, Natural Resources Canada 2026

INTERNATIONAL INVESTMENTS AND INVESTORS

Canada's energy industries operate in free markets, where investments by both Canadian and foreign companies ensure an efficient, competitive and innovative energy system.

Stock of foreign direct investment (FDI)* in Canada and Canadian direct investment abroad (CDIA) in the energy industry



* Direct investment is defined as a company owning a minimum of 10% of voting equity interest in a foreign enterprise and is measured as the total equity value at the time of acquisition. Excludes residential expenditures and intellectual property investments such as exploration expenses.

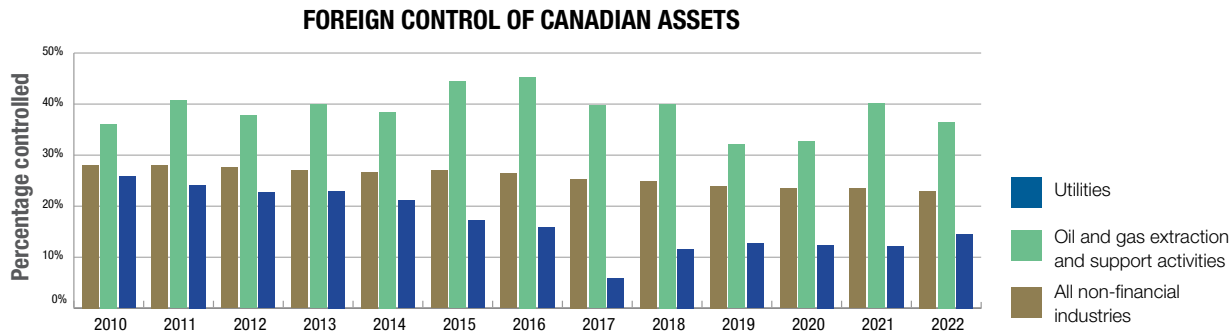
FDI and CDIA include investments in renewable electricity, do not capture other forms of renewable energy.

Stock of Foreign Direct Investment in Canada and Canadian Direct Investment Abroad

- The stock of **foreign direct investment** (FDI) in the energy sector rose in 2024 to **\$157 billion** (+12.4% over the previous year).
- The energy industry's share of overall FDI in Canada was **10%** in 2024, same as in 2023.
- The stock of **Canadian direct investment abroad** (CDIA) was valued at **\$215 billion** in 2024, up 8% from 2023.
- Investment in oil and gas extraction accounted for **\$36 billion** of the CDIA stock in 2024.

FOREIGN CONTROL OF CANADIAN ASSETS

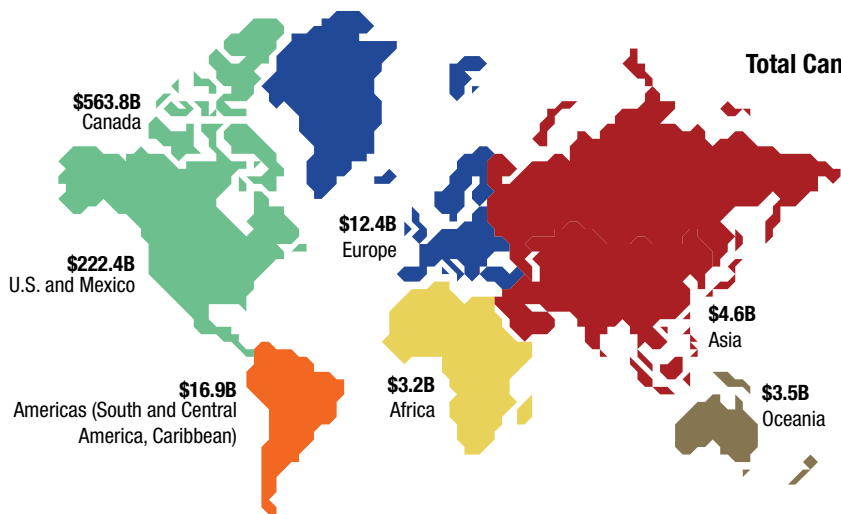
Foreign control is a measure of the extent to which foreign entities operate in Canada. Generally, a corporation is deemed to be foreign-controlled if **more than 50%** of its shares are owned by one or more foreign companies.



Canadian Energy Assets

The total value of Canadian* energy assets (CEA) went up in 2023 to **\$827 billion**, an increase of **9.4%** from **\$756 billion** in 2022. In 2023, domestic CEA totaled **\$564 billion**, up **12.9%** from 2022, while CEA abroad totaled **\$263 billion**, up from **\$256 billion**.

CANADIAN ENERGY ASSETS BY REGION, 2023



Total Canadian energy assets

\$827B

Total Canadian energy assets abroad

\$263B

* A Canadian company is here defined as a publicly traded company headquartered in Canada and not foreign-controlled.

Research, Development and Demonstration

CANADIAN TOTAL EXPENDITURES ON ENERGY RD&D

In 2023-24, federal energy RD&D expenditures were \$1,464M and provincial and territorial (P&T) government energy RD&D expenditures were \$396M, for a combined total of \$1,860M.



In 2023-24, federal spending increased by **38% (\$404M) compared to 2022-23**. Energy efficiency contributed significantly to the total federal spending (46%), doubling its investment in 2023-24 (668M) compared to 2022-23 (385M).



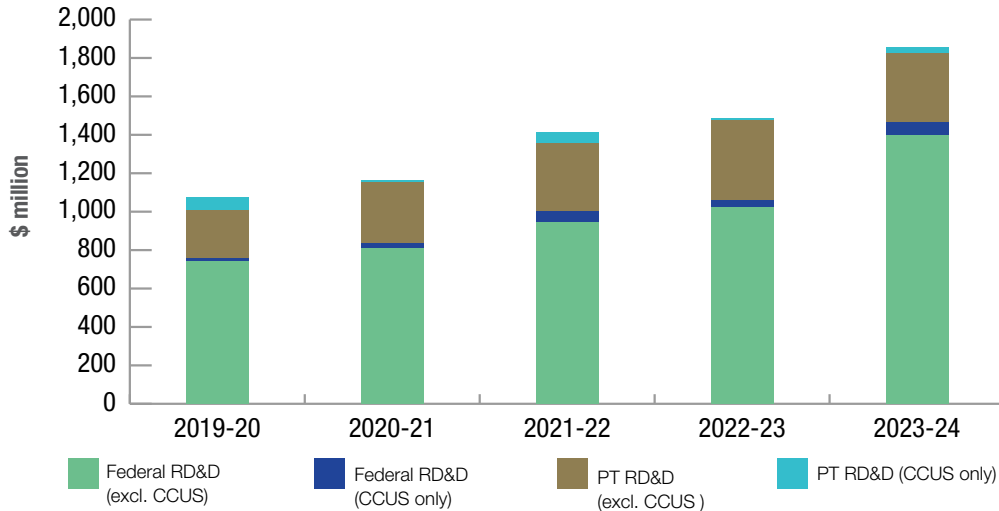
Canada has made international commitments to advance federal energy RD&D expenditures - including through Mission Innovation (MI) and through Canada's 2022 commitment of **\$2B** in pre-allocated money to the Clean Energy Technologies Demonstration Challenge, mobilizing public investments internationally for clean energy demonstrations by 2026. Now at the mid-point of this commitment, federal demonstration investments from 2021-22 to 2023-24 have totalled **\$1.38B** and remain on track to meet the 2026 commitment.



In 2023-24, P&T spending decreased by **7% (a \$29M decrease)** due mostly to fossil fuels (excluding CCUS) and renewables. CCUS had a significant increase by **\$22M to \$31M** in 2023-24, compared to \$9M in 2022-23. Similarly, energy efficiency had an increase by **\$22M to \$142M** in 2023-24, compared to **\$120M** in 2022-23.

Canadian industry spent about **\$2.7B** on energy R&D in 2022, an increase from the spending reported in 2021 (**\$2.3B**).







CANADIAN PUBLIC EXPENDITURES ON ENERGY RD&D



* Provincial and territorial (P/T) includes utilities and other publicly owned entities (i.e. State-Owned Entities).

Generally, federal and provincial/territorial energy RD&D spending continues to increase with significant and steady federal contributions. In 2023-24, combined federal, provincial/territorial CCUS spending increased, similar to the combined spending in 2019-20.

EXPENDITURES ON ENERGY RD&D BY TECHNOLOGY AREA (\$ MILLIONS)

	 Federal (2023-24)	 Provincial and territorial (2023-24)	 Industry (2022)
 Hydrocarbons (including CCUS)	138	57	998
 Renewable and non-emitting energy**	576	138	803
 Energy end use***	751	201	896
Total*	1,464	396	2,697

* Totals may not be exact due to rounding.

** Renewable and non-emitting energy includes renewable and nuclear energy.

*** Energy end use includes energy efficiency related to transport, industry and buildings & communities.

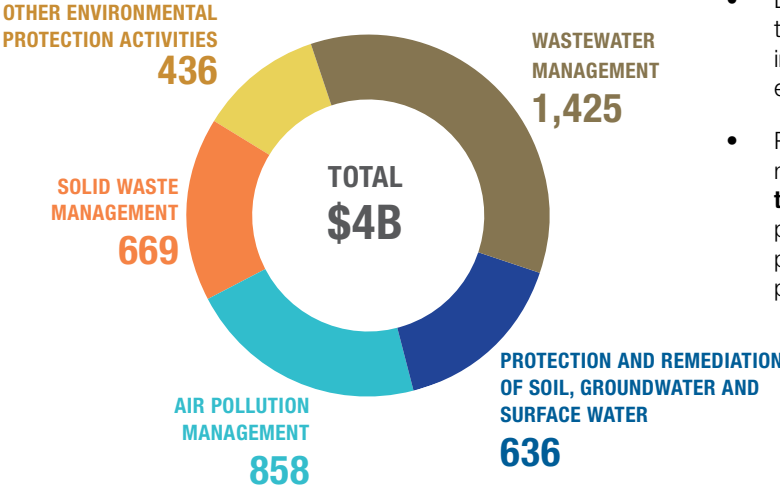
Note: Latest data for industry spending was not available at the time of this publication.

Environmental Protection Expenditures

Environmental protection expenditures (operating and capital spending combined) by the energy sector totalled **\$6.1 billion** in 2023, representing **51%** of expenditures made by all industries.

The oil and gas sector (\$4 billion) accounts for the largest share of those expenditures, at 34% of total environmental protection expenditures made by all industries.

OIL AND GAS EXTRACTION EXPENDITURES PER ENVIRONMENTAL ACTIVITY (2023, \$ MILLIONS)



- Electric power generation, transmission and distribution invested **\$868 million** on environmental protection measures.
- Petroleum and coal product manufacturing invested **more than \$1 billion** in environmental protection activities, with the largest percentage of spending (89%) in pollution abatement and control.

ANNEXES

Annex 1: Notes on methodology

In this publication, energy industries are generally considered to include oil and gas extraction; coal mining; uranium mining; electric power generation, transmission and distribution; pipeline transportation; natural gas distribution; biofuels production; petroleum refineries; and support activities for oil and gas extraction. The petroleum sector is a subset of these industries, and in this publication consists of oil and gas extraction and support activities, pipeline transportation and distribution of oil and gas, and petroleum refineries.

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 a lack of data.

This publication represents data availability at the time of its preparation. All data is subject to revisions by statistical sources. In some instances, more than one source may be available and discrepancies in numbers may occur because of conceptual or methodological differences. In addition, some numbers may not add up precisely due to rounding.

Annex 2: Units and conversion factors

PREFIXES AND EQUIVALENTS

Prefix				
SI/Metric		Imperial	Equivalent	
k	kilo	M	thousand	10 ³
M	mega	MM	million	10 ⁶
G	giga	B	billion	10 ⁹
T	tera	T	trillion	10 ¹²
P	peta	-	quadrillion	10 ¹⁵

Notes

- Tonne may be abbreviated to “t” and is not to be confused with “T” for tera or trillion.
- Roman numerals are sometimes used with imperial units (this can create confusion with the metric “M”).

CRUDE OIL

Upstream

- reserves usually in barrels or multiples (million barrels)
- production/capacity often in barrels per day or multiples (thousand barrels/day or Mb/d, million barrels/day or MMb/d)
- metric: 1 cubic metre = 6.2898 barrels
- International Energy Agency: uses weight (tonnes) rather than volume

Downstream (petroleum products)

- volumes of refined products usually in litres
- 1,000 litres = 1 cubic metre
- U.S.: 1 U.S. gallon = 3.785 litres

NATURAL GAS

Volume

- reserves/production usually in cubic feet or multiples (billion cubic feet or Bcf, trillion cubic feet or Tcf)
- production/capacity often in cubic feet per day or multiples (Bcf/d, Tcf/d)
- metric: 1 cubic metre = 35.3147 cubic feet

Density

- 1 million t LNG = 48.0279 billion cubic feet

Pricing

Volume-based:

- cents per cubic metre (¢/m^3) (customer level in Canada)
- \$ per hundred cubic feet (\$/CCF) (customer level in the U.S.)

Energy content-based:

- \$ per gigajoule (\$/GJ) (company level in Canada)
- \$ per million British thermal units (\$/MMbtu) (company level in the U.S., LNG)

URANIUM

- 1 metric tonne = 1,000 kilograms of uranium metal (U)
- U.S.: in pounds of uranium oxide (U_3O_8)
- 1 lb. U_3O_8 = 0.84802 lb. U = 0.38465 kg U

COAL

- 1 metric tonne = 1,000 kilograms
- U.S.: 1 short ton = 2,000 pounds
- 1 metric tonne = 1.10231 short tons

ELECTRICITY

Capacity

- maximum rated output that can be supplied at an instant, commonly expressed in megawatts (MW)

Total capacity

- installed generator nameplate capacity

Generation/sales

- flow of electricity over time, expressed in watt-hours or multiples:
 - kilowatt-hours or kWh (e.g. customer level)
 - megawatt-hours or MWh (e.g. plant level)
 - gigawatt-hours or GWh (e.g. utility level)
 - terawatt-hours or TWh (e.g. country level)

From capacity to generation

- A 1-MW unit operating at full capacity over one hour generates 1 MWh of electricity
- Over one year, this unit could generate up to 8,760 MWh (1 MW × 24 hr × 365 days)
- Units are rarely used at full capacity over time because of factors such as maintenance requirements, resource limitations and low demand
- “Capacity factor” is the ratio of actual generation to full capacity potential

ENERGY CONTENT

Rather than using “natural” units (e.g. volume, weight), energy sources can be measured according to their energy content – this allows comparison between energy sources

- metric: joules or multiples (gigajoules or GJ, terajoules or TJ, petajoules or PJ)
- U.S.: 1 British thermal unit (BTU) = 1,055.06 joules
- IEA: energy balances expressed in oil equivalent: :
 - thousand tonnes of oil equivalent (ktoe)
 - million tonnes of oil equivalent (Mtoe)

Typical values

- 1 m³ of crude oil = 39.0 GJ
- 1,000 m³ of natural gas = 38.3 GJ
- 1 MWh of electricity = 3.6 GJ
- 1 metric tonne of coal = 29.3 GJ
- 1 metric tonne of wood waste = 18.0 GJ
- 1 metric tonne of uranium = 420,000 GJ to 672,000 GJ

NATURAL GAS RESOURCES AND RESERVES

Proved reserves

Volumes of natural gas from known accumulations, of marketable quality, demonstrated with reasonable certainty to be recoverable, as of the estimate date, under current economic, technological, regulatory, and operating conditions, and suitable for delivery to market within a reasonable time frame.

Marketable/technically recoverable resources

Estimated volumes of natural gas – discovered or undiscovered – that exist in subsurface accumulations. Discovered resources are estimated quantities of gas in known drilled reservoirs, which are too remote to be connected to existing pipelines and markets. If pipelines were built, gas volumes would be recoverable under existing technological and economic conditions.

Undiscovered resources are an estimate, inferred from geological data, of gas volumes thought to be recoverable under current or anticipated economic and technological conditions, but not yet discovered by drilling. These resources may be near or remote from pipelines.

Annex 3: Abbreviations

AC	alternating current		Products Economic Account
AECO	Alberta Energy Company	EGS	enhanced geothermal system
AESO	Alberta Electric System Operator	EIA	Energy Information Administration (U.S.)
AER	Alberta Energy Regulator	EU	European Union
B	billion	EV	electric vehicle
b/d	barrels per day	FDI	foreign direct investment
Bcf/d	billion cubic feet per day	G7	seven wealthiest major developed nations: Canada, France, Germany, Italy, Japan, U.K. and U.S.
Bcm/d	billion cubic metres per day		
BEV	battery electric vehicle		
CANDU	Canada deuterium uranium	GDP	gross domestic product
CAPP	Canadian Association of Petroleum Producers	GHG	greenhouse gas
		GJ	gigajoule
CanREA	Canadian Renewable Energy Association	GST	Goods and Services tax
CCEI	Canadian Centre for Energy Information	GWh	gigawatt hours
CCS	carbon capture and storage	HGL	hydrocarbon gas liquids
CCUS	carbon capture, utilization and storage	HST	Harmonized sales tax
CDIA	Canadian direct investment abroad	IEA	International Energy Agency
CEA	Canadian energy assets	IHA	International Hydropower Association
CER	Canada Energy Regulator	kg	kilogram
CFS	Canadian Forest Service	km	kilometre
CO ₂ equivalent	carbon dioxide equivalent	km ²	square kilometre
CPI	consumer price index	kt	kilotonne
CPL	cents per litre	kWh	kilowatt hour
DC	direct current	lb.	pound
ECCC	Environment and Climate Change Canada	L	litre
ECTPEA	Environmental and Clean Technology	LCOE	levelized cost of electricity

LNG	liquefied natural gas	Pkm	passenger-kilometre
LPG	liquefied petroleum gases	Provinces and territories	
LWR	light water reactor		Alta. – Alberta
m	metre		B.C. – British Columbia
m ²	square metre		Man. – Manitoba
m ³	cubic metre		N.B. – New Brunswick
Mb/d	thousand barrels per day		N.L. – Newfoundland and Labrador
MJ	megajoule		N.S. – Nova Scotia
MMb/d	million barrels per day		N.W.T. – Northwest Territories
MMcf/d	million cubic feet per day		Ont. – Ontario
MMbtu	million British thermal units		P.E.I. – Prince Edward Island
Mt	million tonnes; megatonne		Que. – Quebec
Mtoe	million tons of oil equivalent		Sask. – Saskatchewan
MW	megawatt		Y.T. – Yukon
NGCC	natural gas combined cycle		Atl. – Atlantic provinces
NGL	natural gas liquids		Terr. – Territories
NRCan	Natural Resources Canada	P/T	provincial/territorial
OEE	NRCan Office of Energy Efficiency	PV	photovoltaic
NRSA	Natural Resources Satellite Account	RD&D	research, development and demonstration
NSERC	National Science and Engineering Research Council of Canada	R&D	research and development
		RPP	refined petroleum products
NYMEX	New York Mercantile Exchange	SDTC	Sustainable Development Technology Canada
OECD	Organisation for Economic Co-operation and Development	StatCan	Statistics Canada
PHEV	plug-in hybrid electric vehicle	States	
PHWR	pressurized heavy water reactor		Ala. – Alabama
PJ	petajoule		Ariz. – Arizona

Ark. – Arkansas		N.D. – North Dakota
Calif. – California		Okla. – Oklahoma
Colo. – Colorado		Ore. – Oregon
Conn. – Connecticut		Penn. – Pennsylvania
Del. – Delaware		R.I. – Rhode Island
D.C. – District of Columbia		S.C. – South Carolina
Fla. – Florida		S.D. – South Dakota
Ga. – Georgia		Tenn. – Tennessee
Ill. – Illinois		Tex. – Texas
Ind. – Indiana		Vt. – Vermont
Kans. – Kansas		Va. – Virginia
Ky. – Kentucky		Wash. – Washington
La. – Louisiana		W.Va. – West Virginia
Me. – Maine		Wis. – Wisconsin
Md. – Maryland		Wyo. – Wyoming
Mass. – Massachusetts	Tcf	trillion cubic feet
Mich. – Michigan	Tcm	trillion cubic metres
Minn. – Minnesota	Tkm	tonne-kilometre
Miss. – Mississippi	t	tonnes
Mo. – Missouri	TPES	total primary energy supply
Mont. – Montana	TWh	terawatt-hour
Nebr. – Nebraska	TSX	Toronto Stock Exchange
Nev. – Nevada	U.K.	United Kingdom
N.H. – New Hampshire	U.S.	United States
N.J. – New Jersey	US\$	United States dollars
N.Mex. – New Mexico	V	volt
N.Y. – New York	WCS	Western Canadian Select
N.C. – North Carolina	WTI	West Texas Intermediate

Annex 4: Sources

SECTION 1: KEY ENERGY, ECONOMIC AND ENVIRONMENTAL INDICATORS

• ENERGY PRODUCTION AND SUPPLY

- **Global Primary Energy Production:** IEA. *Annual Database*
- **Global Energy Rankings:** IEA. *Annual Database*; IHA. *World Hydropower Outlook*
- **Primary Energy Production by Region & Source:** StatCan. Tables 25-10-0020-01, 25-10-0029-01, 25-10-0030-01, 25-10-0031-01, and 25-10-0082-01; NRCan OEE. *National Energy Use Database*; ECCC. *Special tabulations*
- **Canada's energy supply:** IEA. *Annual Database*
- **Primary and secondary energy use:** NRCan OEE. *National Energy Use Database*

• ECONOMIC CONTRIBUTION

- **GDP:** StatCan. Tables 38-10-0285-01, 36-10-0221-01, 36-10-0103-01 and 36-10-0400-01; StatCan. *Custom tabulations*; NRCan estimates
- **Employment:** StatCan. Tables 38-10-0285-01, 36-10-0480-01 and 14-10-0023-01; StatCan. *Custom tabulations*; NRCan estimates
- **Energy Trade:** StatCan. *International Merchandise Trade Database*; IEA. *Annual Database*; U.S. EIA. *U.S. Imports by Country of Origin*
- **Canada-U.S. Energy Trade:** StatCan. *International Merchandise Trade Database*; U.S. EIA. *U.S. Imports by Country of Origin*; U.S. Bureau of Economic Analysis. *Gross Domestic Product by State*

- **Canada's Global Energy Trade:** StatCan. *International Merchandise Trade Database*; StatCan. Table: 12-10-0168-01; NRCan estimates
- **Government Revenues:** StatCan. Tables 33-10-0500-01 and 25-10-0065-01; CAPP. *Statistical Handbook*, Table 01-01; geOLOGIC Systems Ltd. *Daily Oil Bulletin. Land sales data*; Canada–Newfoundland and Labrador Offshore Energy Regulator (formerly Offshore Petroleum Board). *Annual Report*; Canada–Nova Scotia Offshore Energy Regulator (formerly Offshore Petroleum Board). *Annual Report*; Government of the Northwest Territories. *Consolidated Financial Statements*; Government of Yukon. *Public Accounts*; Crown–Indigenous Relations and Northern Affairs Canada. *Northern Oil and Gas Annual Report*

• ENERGY AND GHG EMISSIONS

- **Emissions by Sector:** ECCC. *National Inventory Report*; Climate Watch. *Data Explorer*
- **Indexed Trend in GHG Emissions:** ECCC. *National Inventory Report*; StatCan. Tables 17-10-0005-01 and 36-10-0434-03

SECTION 2: INVESTMENT

- **Capital expenditures:** StatCan. Tables 34-10-0035-01, 34-10-0036-01 and 34-10-0040-01
- **Canada's Energy Infrastructure:** StatCan. Table 36-10-0608-01
- **Canada's Major Energy Projects:** NRCan. *Major Projects Inventory*

- **Foreign Direct Investment and Canadian Direct Investment Abroad:** StatCan. Table 36-10-0009-01
- **Foreign Control of Canadian Assets:** StatCan. Tables 33-10-0033-01, 33-10-0005-01 and 33-10-0006-01
- **Canadian Energy Assets:** Compiled by NRCan from S&P Global Market Intelligence and annual financial statements from publicly traded Canadian energy companies
- **Research, Development and Demonstration:** Compiled by NRCan from internal sources
- **Environmental Protection Expenditures:** StatCan. Tables 38-10-0130-01 and 38-10-0132-01

SECTION 3: SKILLS, DIVERSITY AND COMMUNITY

- **Energy Sector Demographics:** StatCan. *NRSA Human Resources Module* custom tables
- **Energy Affordability:** StatCan. Estimation of Energy Poverty Rates Using the 2021 Census of Population; StatCan. Table 11-10-0222-01
- **Household Expenditures on Energy:** StatCan. Table 11-10-0222-01
- **Energy Retail Prices:** StatCan. Table 18-10-0004-01 and 18-10-0001-01; IEA. *Annual Database*
- **Energy Reliant Communities:** NRCan analysis based on StatCan 2021 Census Data

SECTION 4: ENERGY EFFICIENCY

- **Energy use, efficiency and trends:** NRCan OEE. *National Energy Use Database*; NRCan estimates

SECTION 5. CLEAN POWER AND LOW CARBON FUELS

• CLEAN TECHNOLOGY AND THE ECONOMY

- **Environmental and clean technology:** NRCan. *2022 Cleantech Industry Survey*; StatCan. Tables 14-10-0023-01, 36-10-0103-01, 36-10-0629-01 and 36-10-0632-01; Toronto Stock Exchange. *TSX & TSXV Listed Companies*

• ELECTRICITY

- **World production and exports:** IEA. *Electricity Information* [note: IEA production/generation data is expressed on a “gross” basis, i.e. before generating station use]
- **Trade:** CER. *Commodity Tracking System*
- **Canadian and provincial supply:** Compiled by NRCan’s Energy Systems Sector from various sources
- **Prices:** Hydro-Québec. *Comparison of Electricity Prices in Major North American Cities*
- **Electricity energy use:** NRCan OEE. *National Energy Use Database*

• RENEWABLES

- **Electricity GHG emissions:** ECCC. *National Inventory Report*
- **International context – Production:** IEA. *Renewables Information*
- **International context – share of energy supply:** IEA. *World renewables and waste energy supply*
- **Domestic production:** IEA. *Renewables Information*
- **Hydro – international generation:** IEA. *Electricity*

*Information; IEA. Energy Balances of OECD Countries;
IEA. Energy Balances of Non-OECD Countries*

- **Hydro – capacity in Canada:** WaterPower Canada.
*Hydropower Refurbishments and Redevelopments
in Canada*
- **Hydro – facilities and projects:** WaterPower Canada.
*Hydropower Refurbishments and Redevelopments
in Canada*
- **Biomass – Renewable balance:** IEA. *Renewables balances*

- **Biomass – production and facilities:** StatCan. Table 25-10-0031-01; NRCan CFS data compiled from various sources
 - **Biomass – wood fuel use by sector:** StatCan. Tables 25-10-0025-01 and 25-10-0084-01; NRCan estimates
 - **Wind – international context:** Global Wind Energy Council. Global Wind Report
 - **Wind – generation and capacity in Canada:** CanREA. *By the Numbers*; NRCan analysis based on various sources
 - **Wind – wind farms:** AESO. *Current Supply Demand Report*; CanREA. *By the Numbers*; Government of Ontario. *Renewable Energy Projects Listing*; Hydro Québec. *Electricity supply contracts in force in Québec*; SaskPower. *System Map*
 - **Solar PV – international context:** IEA Photovoltaic Power Systems Programme. *2024 Snapshot of Global PV Markets*
 - **Solar PV – capacity in Canada:** NRCan and CanREA. *National Survey Report of PV Power Applications in Canada - 2022*
 - **Solar PV – generation in Canada:** Compiled by NRCan from various sources
 - **Solar PV – solar PV farms:** CanREA. *By the Numbers*; AESO. *Current Supply Demand Report*; Government of Ontario. *Renewable Energy Projects Listing*; NRCan analysis based on various sources
- **URANIUM AND NUCLEAR**
 - **World uranium production and exports:** World Nuclear Association. *World Uranium Mining*; NRCan estimates
 - **World known recoverable resources of uranium:** OECD Nuclear Energy Agency and International Atomic Energy Agency. *Uranium: Resource, Production and Demand*; World Nuclear Association. *Supply of Uranium*
 - **World generation of nuclear power:** International Atomic Energy Agency. *Nuclear Power Reactors in the World*
 - **Canadian supply and demand:** World Nuclear Association. *Uranium in Canada*; Cameco. *Annual report*; NRCan estimates
 - **Nuclear in Canada infographic:** NRCan. *Nuclear Energy and Uranium*
 - **Purchases by U.S. nuclear reactors:** U.S. EIA. *Uranium Marketing Annual Report*
 - **CANDU nuclear reactors and nuclear power plants in Canada:** International Atomic Energy Agency. *Power Reactor Information System*; NRCan analysis based on various sources
 - **Spot prices:** U.S. EIA. *Annual Uranium Market Report*
 - **BIOFUELS AND TRANSPORTATION**
 - **Biofuels – international context:** IEA. *Renewables Information*
 - **Biofuels – production, supply and demand:** StatCan. Tables 25-10-0081-01 and 25-10-0082-01
 - **Transportation – Electric vehicle sales:** StatCan. Tables 20-10-0021-01 and 20-10-0024-02
 - **Transportation – Electric vehicle chargers:** NRCan. *Electric vehicle charging – EV charging basics*; NRCan. *Electric Charging and Alternative Fuelling Stations Locator*
 - **Transportation – GHG emissions:** ECCC. *National Inventory*

Report

- **Hydrogen:** IEA. *Global Hydrogen Review*; NRCan. *Hydrogen Strategy for Canada*

SECTION 6: OIL, NATURAL GAS AND COAL

• PETROLEUM AND THE ECONOMY

- **GDP and employment:** StatCan. Tables 38-10-0285-01 and 36-10-0480-01; StatCan. *Special tabulations of the NRSA Human Resources Module*
- **Capital expenditures:** StatCan. Table 34-10-0036-01 and *special tabulations*
- **Exports:** StatCan. *International Merchandise Trade Database*

• CRUDE OIL

- **World production and exports:** IEA. *Annual Database*
- **World proved reserves:** Oil and Gas Journal. *Worldwide Look at Reserves and Production*
- **Canadian resources – remaining established reserves:** AER. *Alberta Energy Outlook (ST98)*; Government of Alberta. News release: “*New gas reserves take Canada into global top 10*” (March 12, 2025); CAPP. *Conventional reserves special tabulation*
- **Oil wells in Western Canada:** AER. *ST59: Alberta Drilling Activity Monthly Statistics*; BCER. *Drilling Data for All Wells in BC [BCOGC-41984]*; Petrinex. *Saskatchewan Public Data*; Province of Manitoba. *Oil & Gas Statistics*
- **Canadian and provincial production:** StatCan. Tables 25-10-0063-01 and 25-10-0014-01; NRCan analysis
- **Canadian Supply and Demand:** StatCan. Tables 25-10-0063-01 and 25-10-0014-01; StatCan.

International Merchandise Trade Database

- **Trade:** StatCan. Table 25-10-0063-01; StatCan. *International Merchandise Trade Database*; U.S. EIA. *Imports by Country of Origin and Refining and Processing*
- **Oil Sands:** CAPP. *Statistical Handbook, Table 04-14*; StatCan. Tables 34-10-0036-01 and 25-10-0063-01; AER. *Alberta Energy Outlook (ST98)*
- **Prices:** U.S. EIA. Table *Cushing, OK WTI Spot Price FOB*; Sproule. *Price Forecast*
- **Pipelines:** CER. *Crude Oil Pipeline Transportation System*
- **Transportation by Rail:** CER. *Canadian Crude Oil Exports by Rail – Monthly Data*; StatCan. Table 23-10-0062-01
- **Oil Sands Environmental Considerations:** ECCC. *National Inventory Report*; World Resources Institute. *Country Greenhouse Gas Emissions Data*; Alberta Government. *Oil Sands Information Portal*; Alberta Government. *Oil Sands 101*; Alberta Government. *Lower Athabasca Regional Plan*; AER. *Oil Sands Mining Water Use*; AER. *Oil Sands In Situ Recovery Water Use*; AER. *Alberta Mineable Oil Sands Plant Statistics Monthly Supplement (ST39)*; AER. *Alberta In Situ Oil Sands Production Summary (ST53)*; StatCan. Table 25-10-0063-01; NRCan. *Boreal forest data*

• NATURAL GAS

- **World production and exports:** IEA. *World natural gas statistics*
- **World proved reserves:** Oil and Gas Journal. *Worldwide look at reserves and production*
- **Canada and U.S. – Proved reserves:** U.S. EIA. *U.S. Crude Oil and Natural Gas Proved Reserves, Year-end 2023*; Oil and Gas Journal. *Worldwide look at reserves and production*; AER. *Alberta Energy Outlook (ST98)*; Government of Alberta. News release: “New gas reserves take Canada into global top 10” (March 12, 2025); BC Energy Regulator. *2023 Gas Reserves Report*; Saskatchewan Ministry of Energy and Resources. *Five-Year Gas Reserve Summary Report*; Headwater Exploration Inc. *Annual Information Form*; CER. *Provincial and Territorial Energy Profiles*; Consultations with provincial and territorial governments and energy regulators, the CER, CAPP, and the Canada–Newfoundland and Labrador Offshore Energy Regulator (formerly Offshore Petroleum Board), and the Canada–Nova Scotia Offshore Energy Regulator (formerly Offshore Petroleum Board); *NRCan estimates*
- **Canada and U.S. – Marketable and technically recoverable resources:** CER. *Canada’s Energy Future 2023, Macro Indicators*; U.S. EIA. *Annual Energy Outlook 2025*; U.S. EIA. *Shale Gas, Proved Reserves as of Dec. 31*; NRCan analysis
- **Canadian average marketable production:** CER. *Canada’s Energy Future 2023, Figure Data (Excel)*; StatCan. Table 25-10-0055-01
- **U.S. average marketable production:** U.S. EIA. *Annual Energy Outlook 2023*; U.S. EIA. *Dry Natural Gas Production, Annual*
- **LNG imports, Canada:** StatCan. *Canadian International Merchandise Trade Database*
- **LNG imports, U.S.:** U.S. EIA. *U.S. Liquefied Natural Gas Imports (MMcf)*
- **LNG exports, Canada:** CER. *Commodity Tracking System*
- **LNG exports, U.S.:** U.S. EIA. *Liquefied U.S. Natural Gas Exports (MMcf)*
- **Natural gas wells in Western Canada:** AER. *ST59: Alberta Drilling Activity Monthly Statistics*; BCER. *Drilling Data for All Wells in BC [BCOGC-41984]*; Petrinex. *Saskatchewan Public Data*; Province of Manitoba. *Oil & Gas Statistics*
- **Canadian and U.S. marketable production of natural gas:** StatCan. Table 25-10-0055-01; U.S. EIA. *Dry Natural Gas Production, Annual*
- **Canadian trade of natural gas:** CER. *Commodity Tracking System*; StatCan. *Canadian International Merchandise Trade Database*
- **Marketable production by province:** StatCan. Table 25-10-0055-01
- **Upstream prices:** Sproule. *Sproule Price Forecast*; StatCan. Table 33-10-0163-01
- **Pipelines:** CER. *Facilities we regulate*
- **Natural gas energy use:** NRCan OEE. *National Energy Use Database*

- **HGLs**

- **Processing plant production:** StatCan. Table 25-10-0036-01
- **Refinery production:** StatCan. *Monthly Refined Petroleum Product Survey*
- **Shares of NGL Production by province:** CAPP. *Custom report for NRCAN*
- **NGLs end use:** NRCAN OEE. *National Energy Use Database*
- **Exports:** CER. *Commodity Tracking System*
- **Imports:** StatCan. *International Merchandise Trade Database*

- **RPPs**

- **Canadian refineries:** Compiled by NRCAN from various sources
- **Supply and Demand:** StatCan. Table 25-10-0081-01
- **Crude oil shipped to domestic refineries:** StatCan. Table 25-10-0063-01
- **Domestic consumption by product:** StatCan. Table 25-10-0081-01; NRCAN analysis
- **Trade:** StatCan. Table 25-10-0081-01; StatCan. *International Merchandise Trade Database*. U.S. EIA. *U.S. Imports by Country of Origin for Petroleum and Other Liquids*
- **Gasoline prices:** Kalibrate Technologies Ltd. *Petroleum price data, Pricing analytics: Margin*
- **Refinery capacity:** Oil Sands Magazine. *List of Canadian Refineries; NRCAN analysis*

- **COAL**

- **World proved reserves:** U.S. EIA. *Coal Reserves*
- **World production and exports:** IEA. *Coal Information*
- **Canadian supply and demand:** IEA. *Coal Information; StatCan. International Merchandise Trade Database; NRCAN analysis*
- **Canadian Production:** StatCan. Table 25-10-0046-01; *NRCAN analysis*
- **Electricity Generation:** StatCan. Tables 25-10-0017-01 and 25-10-0084-01; *Data compiled by NRCAN from StatCan and other public sources*

- **GHG EMISSIONS FROM PETROLEUM**

- **GHG Emissions by Sector:** ECCC. *National Inventory Report*

CANADIAN CENTRE FOR ENERGY INFORMATION

CCEI

Canadian Centre for Energy Information

<https://energy-information.canada.ca/en>

