Energy

11

Overview

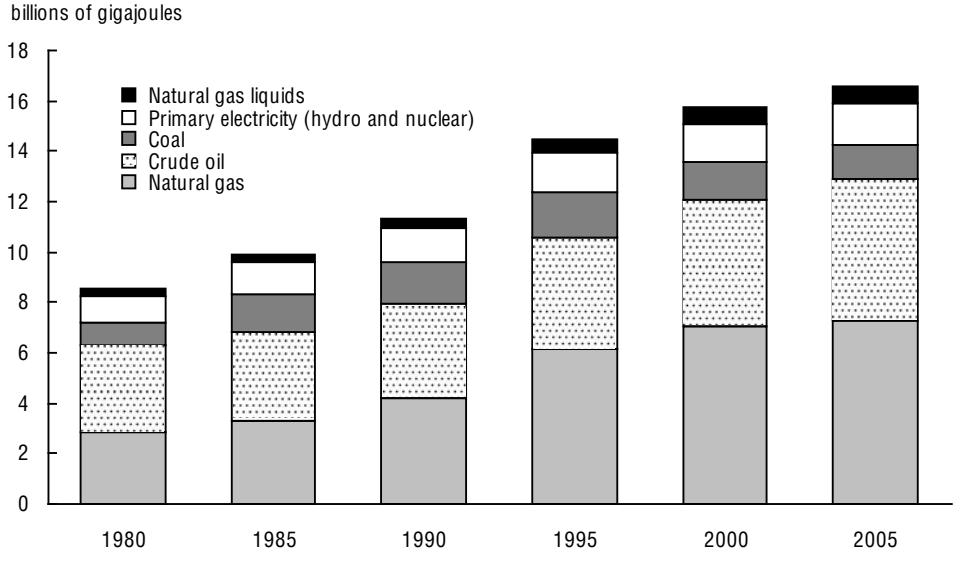
Energy plays a central role in Canadian life. Canadians are among the world's biggest consumers of energy, relying heavily on it for transportation, heating, industrial production and economic growth. Canada is also one of the world's leading producers of energy, exporting huge quantities annually. The environmental impact of energy use has become one of the major issues of our day, forcing many Canadians to rethink how they consume energy.

At the individual level, some hard facts about energy supply and demand hit almost all Canadians in 2006, when gasoline prices soared above $1.00 a litre. Crude oil prices have risen significantly—from $US20 in 2002 to US$77 in the fall of 2006—because of increased demand for oil, political change in Venezuela, the war in Iraq, other conflicts in the Middle East, production cuts by the Organization of Petroleum Exporting Countries (OPEC), and supply disruption after hurricanes in the Gulf of Mexico.

Even though production volume fell slightly in 2005, the value of crude oil exports increased 21%, partly the result of a 30% gain in prices. From 1990 to 2004, the average price for regular unleaded gasoline at Canadian gas stations climbed about 44%, and then jumped another 15% in 2005 alone. Meanwhile, fuel oil for heating households rose 126% from 1990 to 2005.

But rising energy prices aren't turning Canadians off energy: we continue to consume more than ever. Energy consumption per capita has increased an average 1% a year over the past 20 years. In 2004, we used 363 gigajoules of energy per capita, compared with 302 gigajoules in 1984. One gigajoule is the equivalent of a 30-litre tank of gasoline, and will keep a

Chart 11.1
Energy production, by primary energy source



Source: Statistics Canada, CANSIM tables 128-0002 and 128-0009.

60-watt incandescent light bulb lit for six months.

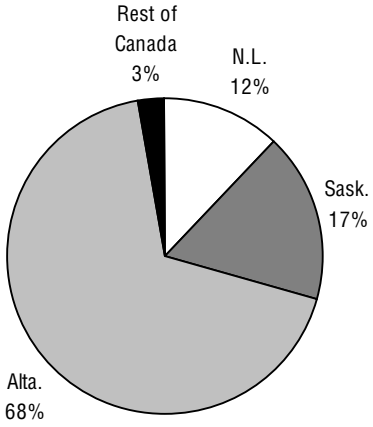
The energy machine

In 2004, driven by an increase in gas and oil production, 16.6 billion gigajoules of primary energy were generated in Canada, more than double the amount in 1978. Gas and oil accounted for 78% of the total production. Electricity (including primary steam) comprised 12% of energy production in the late 1970s, but less than 10% in 2004. Coal production has consistently accounted for about 9%.

Quebec and British Columbia are major generators of hydroelectric power, whereas Alberta and Ontario lead the way in thermal-electric energy production. Ontario produces 89% of Canada's nuclear power.

Less than one-half of one percent of the country's generating capacity comes from wind or tidal power—non-polluting, renewable energy sources. Though still a very minor part of the energy industry, wind energy is the fastest-growing form of renewable energy in the world. Canada's leader in wind energy generation is the town of Pincher Creek, Alberta, which harnesses the chinook winds on the Rocky Mountains' eastern slopes. Combined, Pincher Creek and Quebec's Gaspé Peninsula generate almost 87% of all of Canada's wind power.

Chart 11.2
Production of crude oil, 2006



Source: Statistics Canada, CANSIM table 126-0001.

Table 11.a
Energy production by fuel type, 2005

	terajoules
Coal	1,400,510
Crude oil	5,632,426
Natural gas	7,249,864
Natural gas liquids	655,787
Primary electricity, hydro and nuclear	1,608,679
Refined petroleum products	4,698,812

Source: Statistics Canada, CANSIM table 128-0009.

Keeping pace with demand

Canada is one of the world's largest energy producers, and exports virtually all its surplus energy to the United States, primarily via pipelines and power lines. Global demand and high oil prices have pushed Canada's energy exports upward over the last 25 years. Energy exports have more than quadrupled from 2.1 billion gigajoules in 1980 to 8.8 billion gigajoules in 2004.

Canada's oil industry is currently booming. In 2005, a 30% surge in prices pushed the value of oil exports up to $30 billion, from $25 billion the previous year. Two-thirds of all oil produced was exported in 2005, with 99% of it going to the United States. Overall, oil accounted for 6.7% of all goods and services exported in 2005, more than twice the proportion 10 years earlier.

Two-thirds of the crude oil produced in Canada in 2005 came from Alberta. About one million barrels a day, or 42% of the province's total production, was extracted from the massive oil sands alone. Most of Canada's 180 billion barrels of crude oil reserves—a total second only to Saudi Arabia—is found in the oil sands of northern Alberta. As the most productive fields of

natural gas are exhausted, the industry is turning toward developing non-conventional natural gas from coal—otherwise known as coal bed methane—in the Western Canada Sedimentary Basin.

Energy efficiency

As the extent of our impact on the environment becomes more clear, many Canadians have been looking for ways to improve energy efficiency and reduce greenhouse gas (GHG) emissions. Since 1990, energy efficiency in Canada has increased an estimated 14%. In 2004, efforts to conserve energy lowered consumption by more than 900 million gigajoules, reducing GHG emissions by 53.6 megatonnes—roughly equivalent to removing 13 million cars and light trucks from the roads.

The introduction of new appliances, vehicles, machines and production methods have been part of the solution. From 1990 to 2004, energy efficiency in the home increased by 21%, and the transportation industry increased its efficiency by 18%. Industrial users boosted their energy efficiency by 12%.

Selected sources

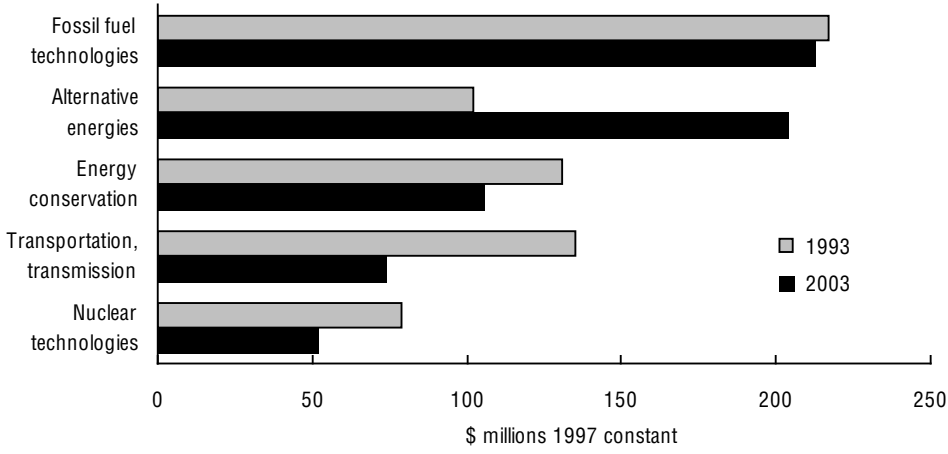
Statistics Canada

- *Analysis in Brief. Occasional.* 11-621-MIE
- *Canadian Social Trends.* Irregular. 11-008-XWE
- *The Consumer Price Index.* Monthly. 62-001-XIB
- *Energy Statistics Handbook.* Quarterly. 57-601-XIE
- *Human Activity and the Environment:* Annual Statistics. Annual. 16-201-XIE
- *Innovation Analysis Bulletin.* Irregular. 88-003-XIE

Other

- Canadian Centre for Energy
- Canadian Wind Energy Association
- National Energy Board
- Natural Resources Canada

Chart 11.3
Research and development spending on alternative sources of energy



Source: Statistics Canada, Catalogue no. 11-621-MIE.

Soaring oil prices

Canadians are paying more for gas at the pump and for higher heating oil bills thanks to international factors, such as geopolitical instability, natural disasters and a growing industrial and consumer demand for crude oil—especially from India and China.

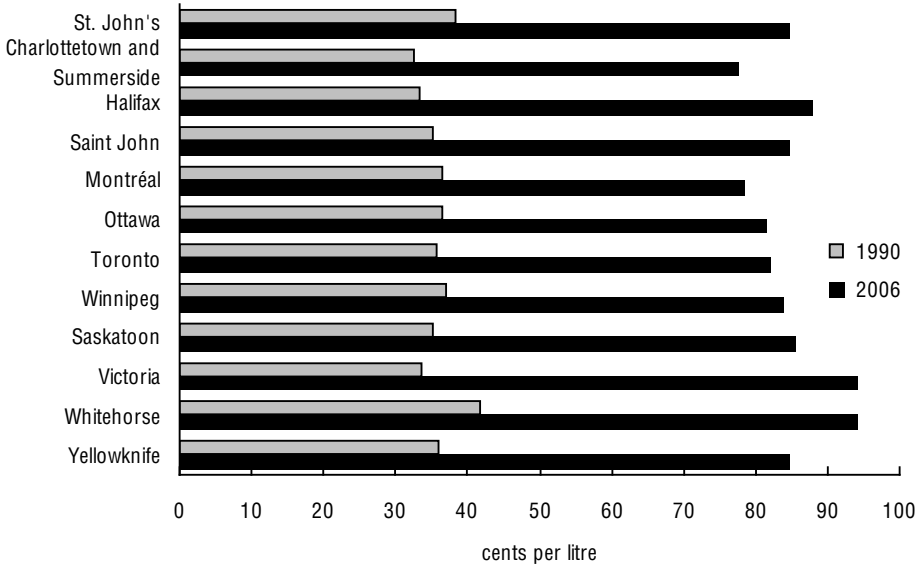
In 2001, the price of oil was at a low US$15.95 a barrel. Over the next couple of years, oil prices climbed significantly and rapidly, as the Organization of Petroleum Exporting Countries cut production, the Chavez government in Venezuela changed the oil industry there, and war began in Iraq.

Then hurricanes hit the U.S. Gulf Coast in 2004 and 2005, damaging offshore drilling rigs and closing refineries. Hurricane Katrina in August 2005 significantly disrupted oil and natural gas production and delayed deliveries. By the fall of 2006, the price of oil had climbed to US$77 a barrel.

This has translated into higher prices for Canadians. From 1990 to 2006, the consumer price of household heating fuel oil increased 123%. Retail prices have more than doubled in every urban centre since 1990. Prince Edward Islanders in Charlottetown and Summerside paid the lowest average annual price in 2006, at 78 cents a litre, whereas residents of Victoria, British Columbia were paying the highest heating oil prices in 2006, an annual average of 94 cents a litre.

Gasoline prices rose 57% from 1990 to 2006. The annual average retail price of regular unleaded gasoline in 2006 was $1.00 per litre or more in urban centres in all provinces and territories, except Ontario, Manitoba and Alberta. Drivers in Yellowknife, Northwest Territories paid the highest average retail price in 2006, almost $1.10 per litre; Edmonton, Alberta's drivers paid the lowest price, $0.91 per litre on average.

Chart 11.4
Household heating fuel, average retail prices, selected urban centres



Source: Statistics Canada, CANSIM table 326-0009.

Winds of change

Canadians have long taken advantage of geography to generate electricity from water: hydroelectricity is our leading renewable energy source. Now Canada's governments and businesses are investing in new sources of renewable energy.

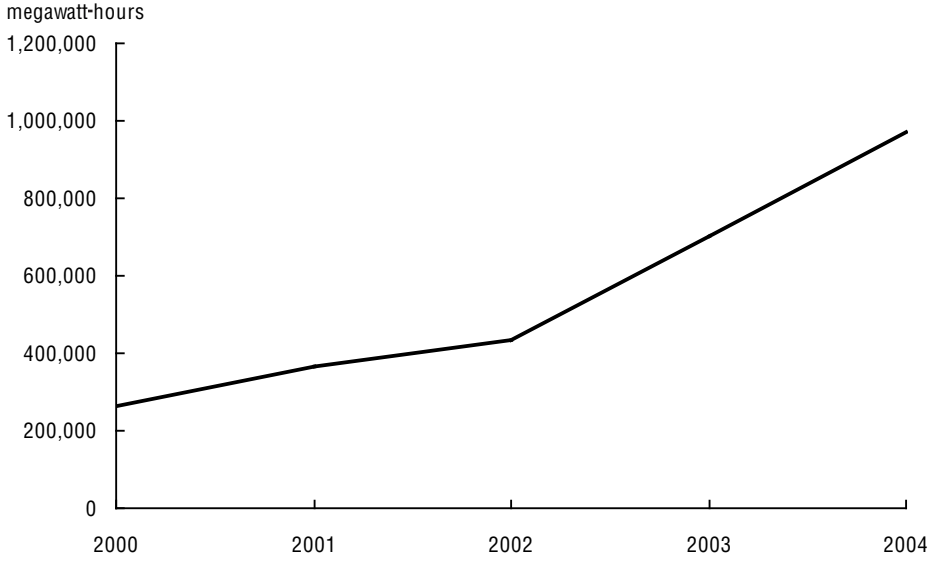
Our fastest-growing renewable energy sources are wind and tidal energy—clean and abundant sources that are economical to produce and fairly reliable where winds and climate are suitable. In 2004, Canada's winds and tides were harnessed to produce 971,873 megawatt-hours of electricity, more than triple the output in 2000. However, this comprised only 0.2% of the electricity generated in Canada that year. Hydroelectric generators produced 58% of our electricity.

Alberta, already a star in fossil fuels, also generates the majority of Canada's electricity produced from wind and tide—64% in 2004. Quebec is second, accounting for 19%. Quebec also produces half the country's hydroelectricity.

Wind and tidal electricity made up 1% or less of the electricity produced in each province and territory in 2004, with one exception: Prince Edward Island generated 73% of its electricity production from wind and tide.

Other renewable energy sources are being developed. Canadian businesses spent $204 million on research and development (R&D) of alternative energy sources and technologies in 2003. More than 40% of that spending went to technologies to store energy or to alternative fuels, such as ethanol and biodiesel. Improvements to hydroelectric generation accounted for 14% of R&D spending, and solar energy, 11%. Only 7% of alternative energy R&D spending went to biomass energy, carbon dioxide capture and wind power technologies combined.

Chart 11.5
Wind and tidal electricity generated



Sources: Statistics Canada, Catalogue no. 57-202-XIE.

The ways we heat our homes

Where we live in Canada—and the mix of energy sources, distribution networks and local prices in that province—determines to a large extent how we heat our homes.

Hydroelectricity, for example, is abundant in Quebec, Manitoba, British Columbia and Newfoundland and Labrador, so it is an important source of energy for heating households in these provinces.

In Quebec, where electricity rates are among the lowest in Canada, more than two out of three households use electricity to heat their homes. More than one-third of dwellings in Quebec are apartments and about 80% of these buildings are electrically heated. This usage rate is much higher than the national average of 56%.

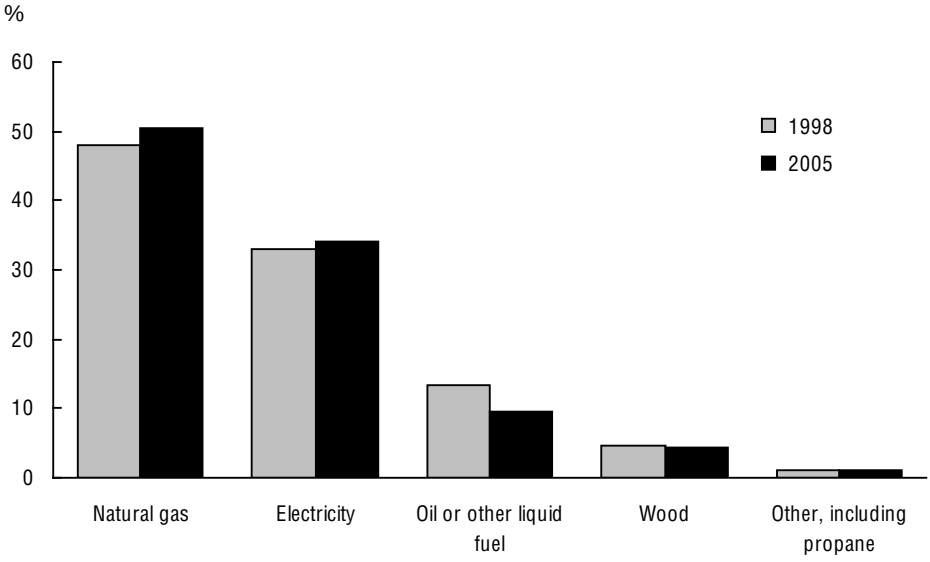
Half of all households in New Brunswick and Newfoundland and Labrador rely on electricity as their leading source. In Nova Scotia, electricity heats only one-quarter of homes. Instead, 50% of families in Nova Scotia turn to oil for home heating. In Prince Edward Island, oil heats 81% of households.

Wood is a popular heating alternative in Atlantic Canada: about one in seven households use wood and other solid fuels like coal. In Newfoundland and Labrador, it is as high as nearly one in five households.

Virtually no homes are heated with natural gas in Atlantic Canada, where natural gas has only been on the market since 2004. In all provinces west of Quebec, natural gas has emerged as the dominant home heating fuel, and has been the only fuel whose use has grown in the last decade.

Fully 97% of Alberta's households heat with natural gas. Natural gas pipelines are plentiful in Manitoba and British Columbia, so about 60% of households there heat with natural gas. Ontarians also use natural gas as their principal energy source for heating.

Chart 11.6
Principal home heating fuel



Source: Statistics Canada, CANSIM table 203-0019.

Natural gas heats up

Over the last 50 years, more Canadians have come to rely on natural gas to heat their homes and commercial spaces. By 2005, half of all Canadian dwellings were heated primarily with natural gas. The new TransCanada natural gas pipeline in the 1950s allowed 26% of homes to heat with gas. The oil shocks of the 1970s and government policies favouring natural gas in Ontario and the Western provinces encouraged wider gas use to heat homes.

In 2005, more than 5.1 million homes were heated with natural gas, at an average annual cost of $1,400. Canadian homes and businesses consumed 2.3 billion gigajoules of natural gas in 2005.

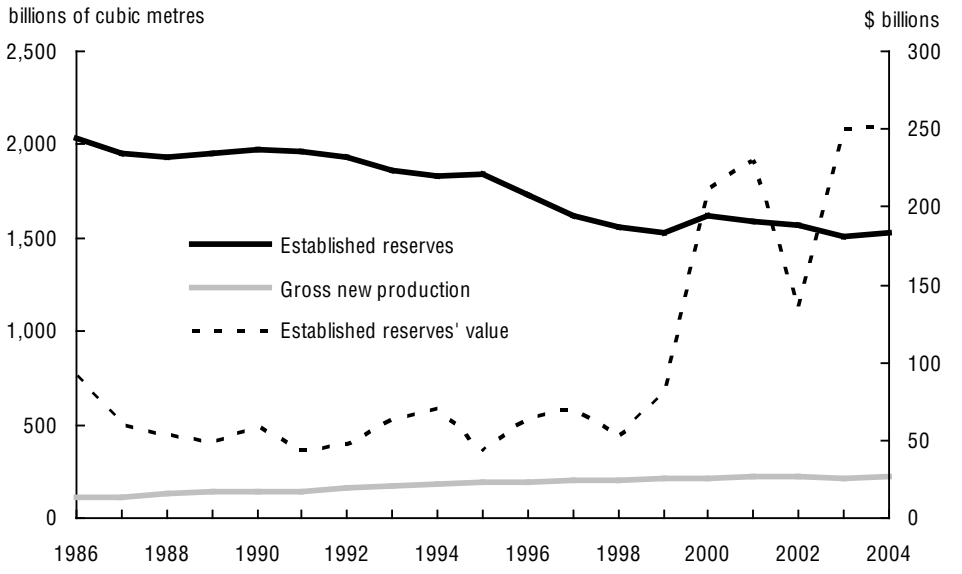
Canada produced 7.2 billion gigajoules in 2005, and exported half of it to the United States: most went to utilities, industries and consumers in the Midwest and Northeast.

Expanding in the 1990s, by 2005 gas made up 44% of the country's primary energy production.

Alberta, British Columbia and Saskatchewan produce 97% of Canada's natural gas. According to Natural Resources Canada, these three provinces alone account for one-quarter of the natural gas produced in all of North America. Another 2% of Canada's production comes from Nova Scotia's and Newfoundland and Labrador's offshore reservoirs.

Employment in the oil and gas industry rose 65% from 1997 to 2006. About 75% of jobs in the industry were in Alberta. These workers are much more likely to work full-time, 95% to 97%, compared with 82% in other industries. They were also less likely to be unionized (9% versus 32%). Their earnings in 2006 averaged $30.36 per hour, compared with $16.73 in the labour market as a whole.

Chart 11.7
Natural gas reserves and value



Source: Statistics Canada, CANSIM tables 131-0001, 153-0001 and 153-0014.

Table 11.1 Energy supply and demand, 1991 to 2005

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
	petajoules														
Primary energy supply[1]															
Availability	9,091.0	9,176.3	9,314.1	9,564.3	9,695.2	10,097.2	10,200.1	10,194.9	10,518.3	10,831.0	10,950.4	11,163.5	11,478.5	11,527.5	11,310.2
Production	11,887.9	12,196.2	13,077.8	13,913.3	14,489.2	14,800.3	15,284.4	15,368.7	15,358.2	15,768.4	15,894.9	16,171.0	16,170.9	16,553.7	16,547.3
Exports	4,998.0	5,246.8	5,653.8	6,348.6	6,878.6	6,950.2	7,496.4	7,818.3	7,824.0	8,328.4	8,443.8	8,561.9	8,499.0	8,822.7	8,662.2
Imports	1,628.9	1,625.0	1,644.9	1,749.7	1,682.5	1,977.2	2,231.8	2,385.3	2,518.5	2,852.2	3,013.4	2,923.6	3,459.8	3,107.6	3,007.4
Primary and secondary energy supply															
Net supply[2]	7,842.4	8,015.7	8,165.2	8,412.4	8,583.6	8,899.6	8,927.6	8,841.3	9,190.7	9,423.7	9,303.5	9,623.1	9,829.9	10,014.0	9,990.1
Producer consumption	937.2	978.8	988.3	1,017.2	1,039.8	1,059.1	999.2	1,073.3	1,229.3	1,257.4	1,264.9	1,344.1	1,340.0	1,303.2	1,354.9
Non-energy use	696.4	709.2	729.5	740.6	758.8	800.0	833.0	811.8	828.9	790.3	863.2	894.3	903.4	1,029.3	981.8
Primary and secondary energy demand[3]	**6,208.8**	**6,327.6**	**6,447.4**	**6,654.7**	**6,785.0**	**7,040.4**	**7,095.5**	**6,956.2**	**7,132.5**	**7,376.0**	**7,175.4**	**7,384.7**	**7,586.5**	**7,681.6**	**7,653.5**
Industrial	1,977.8	1,961.6	1,973.2	2,053.4	2,105.6	2,180.5	2,196.9	2,149.0	2,177.3	2,268.6	2,166.3	2,229.5	2,318.6	2,343.2	2,283.1
Transportation	1,795.1	1,885.8	1,918.2	2,021.3	2,065.1	2,124.7	2,182.9	2,256.6	2,307.3	2,279.8	2,240.4	2,250.1	2,266.3	2,347.3	2,388.8
Agriculture	195.2	196.9	198.8	195.8	209.2	222.9	230.0	224.7	229.9	231.9	218.1	206.8	211.8	208.9	208.7
Residential	1,183.1	1,216.3	1,256.7	1,286.7	1,259.1	1,358.2	1,295.1	1,183.5	1,232.3	1,287.8	1,240.0	1,286.7	1,338.2	1,313.0	1,296.1
Public administration	134.4	133.7	132.1	143.1	143.3	134.1	135.9	130.3	124.5	131.3	126.8	125.2	128.1	131.9	136.6
Commercial and other institutional	923.1	933.4	968.6	954.4	1,002.6	1,020.4	1,054.8	1,012.3	1,061.4	1,176.4	1,184.1	1,286.7	1,323.8	1,337.5	1,340.2

1. Primary energy sources are coal, crude oil, natural gas, natural gas liquids, hydro, and nuclear electricity.

2. Primary and secondary sources.

3. Final demand.

Source: Statistics Canada, CANSIM tables 128-0002 and 128-0009.

Table 11.2 Consumer Price Index, energy, 1992 to 2006

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
	1992=100														
Electricity	100.0	104.2	104.9	104.4	105.6	106.8	107.8	108.5	109.2	111.1	119.6	117.2	122.0	125.4	132.5
Natural gas	100.0	103.8	112.5	105.6	104.4	112.2	119.1	130.7	158.9	206.0	168.7	219.5	214.9	229.9	237.1
Fuel oil and other fuel	100.0	101.7	100.4	99.0	105.8	112.3	100.8	101.3	143.2	143.5	131.8	151.5	166.7	209.2	218.8

Source: Statistics Canada, CANSIM table 326-0002.

Table 11.3 Gasoline prices, by selected urban centres, 1991 to 2006

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
	cents per litre															
St. John's	63.6	60.8	57.0	58.6	62.8	61.4	67.7	64.4	66.2	83.0	79.1	77.0	82.8	91.7	102.1	107.6
Charlottetown and Summerside	63.3	60.8	56.8	55.0	59.3	59.2	60.6	53.6	52.9	70.1	71.9	68.2	74.0	84.1	96.4	103.0
Halifax	..	..	50.7	52.0	54.3	54.8	60.6	57.1	60.8	76.1	72.8	73.4	78.0	87.5	97.9	103.7
Saint John	..	..	54.7	53.6	56.0	55.1	60.2	55.4	59.2	73.3	70.0	72.5	78.8	88.0	97.9	102.2
Québec	64.2	61.1	59.0	56.7	58.2	60.6	61.3	55.2	61.5	71.9	74.0	72.1	77.8	87.0	97.5	102.4
Montréal	64.3	60.2	57.4	55.2	56.8	60.6	61.9	56.3	63.0	77.2	73.8	71.4	76.7	85.8	96.4	100.8
Ottawa	59.2	57.3	54.2	52.5	53.8	55.1	56.0	51.3	56.2	69.0	66.0	65.9	70.2	77.2	88.5	92.2
Toronto	53.8	52.4	51.1	49.8	52.4	56.1	56.1	51.6	57.5	70.8	67.8	67.3	70.9	76.6	89.0	93.4
Thunder Bay	58.8	57.2	56.5	56.2	56.6	61.2	62.6	54.0	58.0	72.6	72.5	71.0	76.9	82.8	94.0	98.5
Winnipeg	52.8	49.5	52.1	52.3	54.6	56.9	57.4	53.3	57.3	66.7	65.0	63.2	67.6	76.7	90.0	96.6
Regina	47.4	49.4	53.6	55.6	57.5	59.3	60.0	55.6	60.5	71.7	72.2	72.7	76.0	82.5	92.7	99.6
Saskatoon	52.7	51.6	55.7	55.3	57.8	60.8	60.6	56.7	59.8	71.7	72.2	73.0	75.9	82.8	93.5	99.8
Edmonton	49.8	47.6	45.7	45.4	47.6	49.6	52.1	47.0	51.4	63.5	61.3	63.4	67.4	75.9	85.1	91.0
Calgary	50.5	46.6	47.3	47.4	50.0	51.7	53.2	48.9	52.6	64.0	64.5	64.6	66.3	74.8	85.8	92.3
Vancouver	57.8	53.8	54.8	55.6	58.4	59.2	58.8	50.6	54.3	69.1	68.9	70.4	76.8	86.0	97.1	103.8
Victoria	58.2	52.1	51.0	51.8	54.8	57.9	59.0	52.7	59.2	73.5	73.9	73.9	81.1	89.9	99.2	105.4
Whitehorse	62.1	58.4	58.0	58.1	63.4	67.0	67.9	66.9	67.3	81.4	81.7	80.8	83.6	93.9	105.5	107.6
Yellowknife	66.1	64.4	65.2	65.7	70.2	73.2	73.9	72.1	73.6	85.4	88.2	88.5	92.2	96.8	105.0	109.5

Note: Average annual price of regular unleaded gasoline at self-service filling stations.
Source: Statistics Canada, CANSIM table 326-0009.

Table 11.4 Household heating fuel prices, by selected urban centres, 1991 to 2006

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
	cents per litre															
St. John's	41.0	39.7	39.6	36.3	36.5	39.8	44.3	35.1	38.6	56.1	54.5	50.1	54.8	62.4	78.6	84.8
Charlottetown and Summerside	38.9	35.5	36.0	34.4	36.1	37.5	39.2	32.4	32.8	48.8	51.3	46.5	53.4	56.8	73.8	77.6
Halifax	37.2	36.5	36.5	33.8	34.0	38.5	42.8	36.9	38.9	56.1	54.7	53.3	61.4	68.5	83.6	87.9
Saint John	38.6	38.2	38.7	36.2	35.2	41.7	46.4	41.5	40.9	59.4	58.7	54.9	62.4	66.0	83.2	84.7
Québec	40.3	39.2	39.2	39.6	39.0	41.8	40.9	37.0	38.2	50.2	49.1	48.8	56.3	61.3	77.2	79.0
Montréal	38.9	37.7	37.0	36.5	33.4	34.6	36.7	32.8	33.6	51.3	49.9	46.3	54.3	58.6	75.0	78.6
Ottawa	39.0	37.3	37.4	37.3	37.3	39.6	42.8	39.2	39.3	53.4	56.8	49.2	57.2	62.9	77.4	81.6
Toronto	38.0	36.4	38.0	38.3	38.3	40.6	43.4	41.2	39.1	54.3	55.9	50.8	57.9	64.0	78.0	82.2
Thunder Bay	43.9	40.9	41.0	40.2	42.0	45.2	43.8	37.7	39.1	54.3	54.6	47.9	57.1	62.9	81.4	85.5
Winnipeg	42.5	41.0	42.5	41.8	41.9	44.4	47.8	47.0	45.6	56.1	60.2	53.0	60.8	64.4	81.6	84.0
Regina	38.2	36.1	35.7	35.6	36.9	39.7	42.7	40.9	41.4	53.3	55.2	51.8	55.7	62.4	82.0	82.6
Saskatoon	40.3	37.6	38.0	39.3	40.9	41.9	44.1	42.1	41.7	54.0	56.5	54.6	59.3	65.3	80.0	85.5
Vancouver	41.7	40.4	41.4	41.5	41.5	42.5	43.9	41.4	42.2	57.1	58.1	54.2	59.2	69.4	88.1	89.0
Victoria	39.8	39.0	39.5	39.6	39.6	40.5	44.2	40.7	42.9	57.9	58.0	53.6	62.9	72.3	90.8	94.1
Whitehorse	45.0	41.8	42.5	42.5	41.9	43.3	46.0	42.4	41.6	57.0	63.1	57.5	64.5	72.3	88.4	94.1
Yellowknife	39.5	37.1	38.7	38.7	37.9	39.6	38.9	35.0	37.1	52.3	51.9	49.0	56.5	62.0	81.3	84.8

Note: Average annual price.
Source: Statistics Canada, CANSIM table 326-0009.

Table 11.5 Established crude oil reserves, 1990 to 2004

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
	millions of cubic metres														
Canada	**657.3**	**614.9**	**590.4**	**582.2**	**544.5**	**553.0**	**526.7**	**532.2**	**673.5**	**642.5**	**667.3**	**644.7**	**606.1**	**590.0**	**603.8**
Newfoundland and Labrador	..	..	..	..	..	..	..	..	144.3	138.0	159.6	151.0	134.4	121.3	138.7
Ontario	1.4	1.3	1.2	1.2	2.0	1.9	1.9	1.8	1.9	1.9	2.0	1.9	1.8	1.9	1.9
Manitoba	7.4	7.2	6.7	6.5	6.3	5.6	5.1	4.7	4.2	4.3	4.5	4.0	3.4	4.6	3.9
Saskatchewan	119.8	120.2	122.6	130.2	141.9	150.1	156.8	176.6	180.9	169.1	182.1	184.9	183.9	184.7	187.9
Alberta	510.5	468.5	442.0	426.8	374.8	374.1	342.0	326.8	315.2	301.6	291.4	278.3	260.3	253.9	249.2
British Columbia	18.2	17.7	17.9	17.5	19.4	21.3	20.9	22.3	26.9	27.7	27.6	24.7	22.3	23.6	22.2

Note: Data are for closing stock of established crude oil reserves.
Source: Statistics Canada, CANSIM table 153-0013.

Table 11.6 Established natural gas reserves, 1990 to 2004

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
	billions of cubic metres														
Canada	**1,978.6**	**1,965.2**	**1,929.1**	**1,859.9**	**1,832.7**	**1,840.9**	**1,725.9**	**1,620.4**	**1,562.2**	**1,526.8**	**1,614.5**	**1,590.8**	**1,569.7**	**1,504.1**	**1,532.2**
Nova Scotia	..	..	..	..	..	..	..	..	..	..	67.1	61.7	56.2	23.2	19.3
Ontario	16.9	16.7	16.9	17.2	13.4	12.0	12.5	12.5	12.2	12.0	11.6	11.5	11.3	11.5	11.5
Saskatchewan	83.9	82.1	78.4	84.7	86.7	86.6	81.8	76.5	71.5	68.6	75.6	81.7	76.2	87.4	85.0
Alberta	1,647.4	1,626.2	1,594.7	1,534.9	1,490.3	1,488.8	1,378.1	1,284.0	1,239.9	1,207.2	1,210.7	1,184.4	1,171.4	1,122.2	1,127.0
British Columbia	230.4	240.1	239.2	223.1	242.2	253.5	253.5	247.4	238.6	239.0	249.5	251.5	254.7	259.9	289.4

Note: Data are for closing stock of established natural gas reserves.
Source: Statistics Canada, CANSIM table 153-0014.

Table 11.7 Established reserves of natural gas liquids, 1990 to 2004

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
	thousands of cubic metres														
Canada	**649,718**	**639,935**	**636,588**	**621,645**	**593,278**	**599,569**	**546,580**	**502,751**	**487,525**	**487,339**	**486,977**	**476,429**	**370,919**	**310,651**	**307,546**
Manitoba	72	65	61	56	52	46	91	0	..	..	..	..	..	..	..
Saskatchewan	1,976	1,862	1,724	2,035	2,207	2,155	2,086	1,632	1,482	1,306	1,010	981	1,000	1,029	888
Alberta	637,300	626,600	623,700	603,200	574,300	580,600	527,500	483,400	468,900	469,700	473,900	463,600	359,100	298,500	295,000
Propane	124,800	121,400	121,100	118,100	111,600	109,400	103,000	91,400	88,600	82,600	85,500	84,100	79,300	69,400	71,300
Ethane	320,000	316,000	312,000	305,000	290,000	300,000	264,000	245,000	238,000	256,000	252,000	252,100	165,100	124,000	122,900
Butane	71,700	69,900	70,600	67,100	63,900	62,900	58,500	51,900	51,100	48,600	50,400	49,900	46,900	41,900	41,500
Pentanes plus	120,800	119,300	120,000	113,000	108,800	108,300	102,000	95,100	91,200	82,500	86,000	77,500	67,800	63,200	59,300
British Columbia	10,370	11,408	11,103	16,354	16,719	16,768	16,903	17,719	17,143	16,333	12,067	11,848	10,819	11,122	11,658

Note: Data are for closing stock of established reserves of natural gas liquids.
Source: Statistics Canada, CANSIM table 153-0015.

Table 11.8 Energy fuel consumption of the manufacturing sector, by subsector, 2000 to 2005

	2000	2001	2002	2003	2004	2005
	terajoules					
All manufacturing	**2,597,020**	**2,511,331**	**2,511,322**	**2,521,077**	**2,614,696**	**2,526,174**
Food	94,607	89,116	88,765	89,041	90,928	91,666
Beverage and tobacco products	13,113	12,196	12,896	12,237	12,266	12,018
Textile mills	9,993	8,634	8,238	8,050	8,058	7,287
Textile product mills	4,053	4,275	4,303	3,554	3,545	3,498
Clothing	5,107	5,174	4,985	4,978	3,997	2,504
Leather and allied products	1,137	1,071	966	768	568	372
Wood products	129,434	118,511	122,595	120,183	124,853	128,877
Paper	883,378	834,855	830,779	835,318	850,894	800,071
Printing and related support activities	9,668	8,754	8,548	8,765	8,521	8,656
Petroleum and coal products	325,858	345,471	366,241	368,429	405,491	358,016
Chemicals	294,962	275,596	252,056	254,575	278,149	272,827
Plastic and rubber products	32,172	33,972	32,592	35,045	37,011	39,090
Non-metallic mineral products	121,203	115,198	118,845	117,924	126,049	124,494
Primary metals	536,431	524,957	519,559	521,073	521,069	529,160
Fabricated metal products	33,678	38,542	41,361	39,784	41,647	41,982
Machinery	13,893	14,070	13,819	15,223	16,042	17,529
Computer and electronic products	6,636	3,682	3,931	4,563	5,100	5,556
Electrical equipment, appliances and components	7,046	6,318	6,011	6,708	7,107	7,180
Transportation equipment	59,592	54,249	57,134	56,725	56,267	57,524
Furniture and related products	10,063	11,058	11,308	11,521	10,908	11,660
Miscellaneous manufacturing	4,997	5,633	6,391	6,610	6,226	6,205

Note: North American Industry Classification System (NAICS), 2002.
Source: Statistics Canada, CANSIM table 128-0006.

Table 11.9 Energy fuel consumption of the manufacturing sector, by fuel type, 2000 to 2005

	2000	2001	2002	2003	2004	2005
	terajoules					
Energy consumed	**2,597,020**	**2,511,331**	**2,511,322**	**2,521,077**	**2,614,696**	**2,526,174**
Coal	49,055	47,572	46,775	50,841	55,381	50,285
Coal coke	103,429	96,338	93,299	92,236	93,389	92,150
Coke oven gas	27,120	27,036	26,824	28,019	28,333	29,552
Electricity	690,247	684,234	696,960	705,419	700,993	723,778
Heavy fuel oil	139,163	139,351	114,653	138,696	150,234	126,039
Middle distillates	24,885	22,736	19,838	18,166	19,896	20,603
Natural gas	782,775	721,897	726,312	672,564	694,866	662,989
Petroleum coke and coke from catalytic cracking catalyst	68,417	75,647	84,085	88,419	94,986	84,468
Propane	13,239	15,358	12,640	11,634	9,448	8,238
Refinery fuel gas	151,392	173,033	175,149	178,996	207,558	186,407
Spent pulping liquor	319,683	288,942	290,859	292,635	299,806	283,722
Steam	37,394	40,076	41,336	47,956	48,029	48,764
Wood	190,220	179,109	182,594	195,495	211,777	209,178

Note: North American Industry Classification System (NAICS), 2002.
Source: Statistics Canada, CANSIM table 128-0006.

Abbreviations and symbols

Provinces and territories	
Newfoundland and Labrador	N.L.
Prince Edward Island	P.E.I.
Nova Scotia	N.S.
New Brunswick	N.B.
Quebec	Que.
Ontario	Ont.
Manitoba	Man.
Saskatchewan	Sask.
Alberta	Alta.
British Columbia	B.C.
Yukon	Y.T.
Northwest Territories	N.W.T.
Nunavut	Nvt.

Measurements	
centimetre	cm
metre	m
kilometre	km
gram	g
kilogram	kg
litre	L
millilitre	mL
hour	h
watt	W
kilowatt	kW
degrees Celsius	°C

The symbols described in this document apply to all data published by Statistics Canada from all origins, including surveys, censuses and administrative sources, as well as straight tabulations and all estimations.

.	not available for any reference period
..	not available for a specific reference period
…	not applicable
0	true zero or a value rounded to zero
0^s	value rounded to zero where there is a meaningful distinction between true zero and the value that was rounded
^{p}	preliminary
^{r}	revised
x	suppressed to meet the confidentiality requirements of the *Statistics Act*
^{E}	use with caution
^{F}	too unreliable to be published

Note: In some tables, figures may not add to totals because of rounding.

When the figure is not accompanied by a data quality symbol, it means that the quality of the data was assessed to be 'acceptable or better' according to the policies and standards of Statistics Canada.

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