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Fuel Focus

*Understanding Gasoline Markets in Canada
and Economic Drivers Influencing Prices*

2012 Annual Review

January 11, 2013

Canada

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2012 Annual Review

Fuel Focus 2012 Annual Review summarizes the events that characterized the Canadian retail gasoline market during 2012. Throughout the year, the bi-weekly *Fuel Focus* report provides readers with regular information on the various aspects of the Canadian gasoline markets and the economic drivers influencing prices.

Highlights

- The following two paragraphs discuss Canadian average retail pump prices based on averaging once per week snapshots of retail prices across Canada. Prices in individual markets have an even wider range than the Canadian average price range.
- Canadian retail gasoline prices in 2012 averaged \$1.28 per litre, an increase of 3.5 cents per litre from 2011. Gasoline prices fluctuated within a range of 19 cents per litre from a low of \$1.17 per litre to a high of \$1.36 per litre in 2012. In comparison, the range was 23 cents per litre from a low of \$1.13 per litre to a high of \$1.36 per litre in 2011.
- Retail pump prices rose early in the year, starting at \$1.21 per litre, peaking at \$1.36 per litre in April, declining to \$1.23 per litre in July, rising again in the third quarter and declining rapidly throughout the rest of the year, ending at \$1.19 per litre. Most of the fluctuations in retail gasoline prices were due to crude oil prices. The Canadian average retail pump price of \$1.28 per litre in 2012 was higher than the average retail pump prices of \$1.24 per litre registered in 2011 and \$1.04 per litre in 2010.
- Retail pump prices increased in 2012, compared to 2011, due to increased average refining and marketing costs and margins, and higher provincial taxes.
- Diesel fuel and furnace oil prices rose by 1 and 5 cents per litre to \$1.25 and \$1.18 per litre, respectively.
- Canadian and American wholesale gasoline prices averaged approximately 81 and 79 cents per litre respectively in 2012, compared to 78 and 76 cents per litre respectively in 2011. Overall, average retail pump prices reflected the upward pressure from North American wholesale gasoline prices and world crude oil prices.
- Crude oil prices for the three crude oil benchmarks (Edmonton Par, WTI and Brent) averaged \$612/m³ (US\$97/bbl) in 2012—a decrease of \$14/m³ (US\$3/bbl) from 2011. Overall, Edmonton Par prices averaged \$542/m³ (US\$86/bbl), a decline of \$56/m³ (US\$10/bbl), while WTI remained almost unchanged from the previous year at \$592/m³ (US\$94/bbl) and Brent prices averaged \$703/m³ (US\$112/bbl), an increased of \$14/m³ (US\$1/bbl).

Figure 1: Crude Oil and Regular Gasoline Price Comparison (National Average)

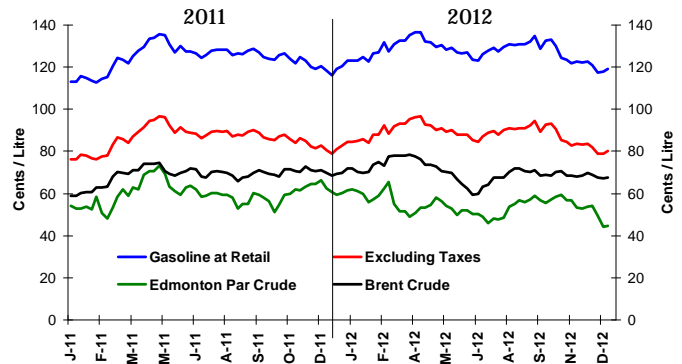
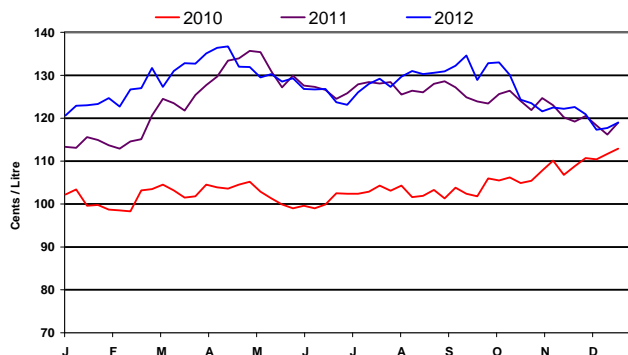


Figure 2: Weekly Regular Gasoline Prices



Changes in Fuel and Crude Oil Prices

¢/L	Annual (National Average)		
	2012	2011	Change
Gasoline	127.5	124.0	+3.5
Diesel	125.4	124.7	+0.7
Furnace Oil	117.7	113.0	+4.7
Edmonton Par	54.4	59.8	-5.4
Brent	70.3	69.2	+1.1

Source: NRCan

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Retail Gasoline Overview

The annual average gasoline pump price in the selected cities shown in Figure 3 was \$1.28 per litre in 2012—an increase of nearly 4 cents per litre compared to 2011.

The increase in retail gasoline prices was primarily due to increased refining and marketing costs and margins and higher provincial taxes.

In addition, apprehensions over the European debt crisis and the impact of a global economic downturn both contributed to a push and pull on oil prices.

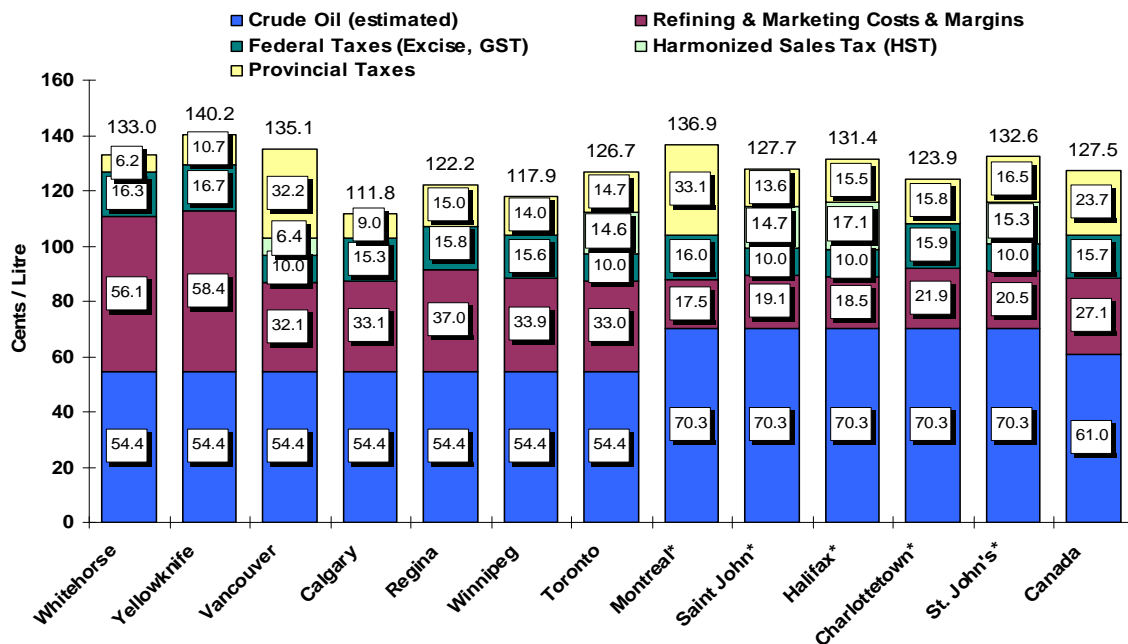
Crude oil, the main pump price component, averaged 61 cents per litre in 2012—a decrease of nearly 3 cents per litre from the previous year.

The refining and marketing costs and margins component increased by 5 cents per litre in 2012 to 27 cents per litre.

In 2012, federal and provincial taxes accounted for 39 cents per litre of the average gasoline price at the pump. This represents a 2.7 cent-per-litre increase from 2011.

Average retail gasoline prices in Montreal increased by 6 cents per litre, mainly due to higher provincial taxes. Of all the provincial centres, Calgary registered the lowest price increase at 0.6 cent per litre in spite of 6 cents per litre increase in refining and marketing costs and margins.

Figure 3: Regular Gasoline Pump Prices in Selected Cities
Annual Average for 2012



Source: NRCan

* Regulated Markets

Regular Gasoline Pump Price Components in Selected Cities													
Change in Annual Average for 2012 over 2011 (cents per litre)													
Selected Cities	WH	YK	VA	CY	RE	WG	TO	ML	SJ	HX	CH	SJ's	CA
Provincial Taxes			1.4			0.8		1.9					2.3
HST			0.2				4.4	0.6	0.7			0.4	
Federal Taxes	0.2	0.2				0.2		0.3			0.2		
R & M Costs and Margins	9.0	9.2	7.3	6.0	6.2	7.9	4.1	3.1	4.0	4.1	2.8	2.2	4.7
Crude Oil - (Edmonton Par and Brent)	-5.4	-5.4	-5.4	-5.4	-5.4	-5.4	-5.4	1.1	1.1	1.1	1.1	1.1	-2.8
Retail Pump Prices	3.8	4.0	3.5	0.6	0.8	3.5	3.1	6.3	5.7	5.9	4.1	3.6	3.5

Note: Empty fields indicate no changes from 2011 to 2012. Shaded areas indicate the tax is not applicable. Federal taxes include the excise tax and the GST where applicable.





Wholesale Gasoline Prices

In 2012, wholesale gasoline prices in Canada and the U.S. followed similar trends, with the annual average in Canada at 80.6 cents per litre being slightly higher by 1.3 cent per litre than the 79.2 cents per litre in selected American centres.

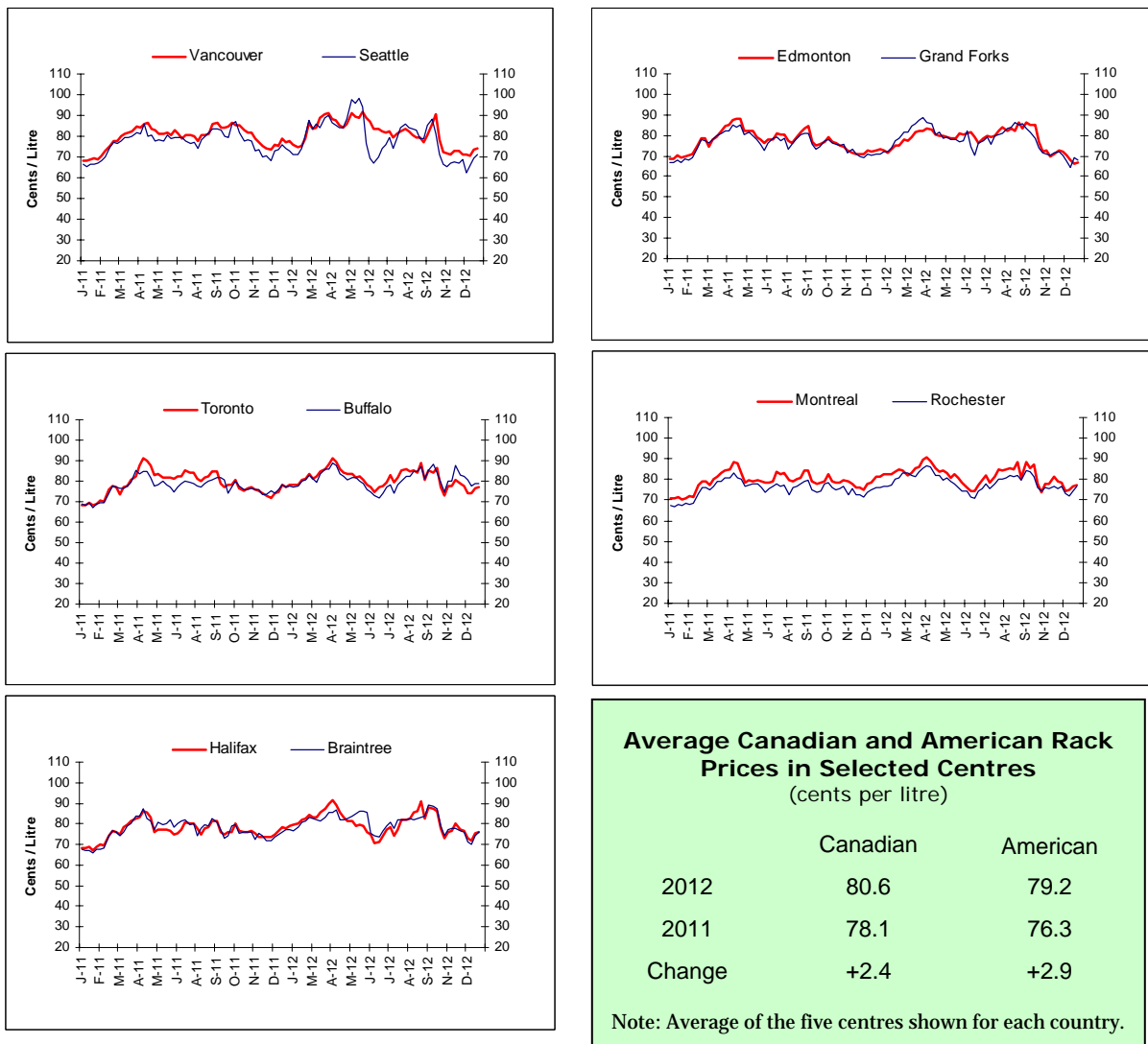
Overall, the increase in wholesale prices reflected the increase in gasoline demand on the continental North American market and tensions over global oil prices.

Wholesale gasoline prices fluctuated between approximately 89 and 72 cents per litre in the Canadian

markets and between 87 and 70 cents per litre in nearby U.S. markets. The price differentials between certain Canadian and U.S. centres were fairly stable during the year. By and large, Canadian and American wholesale gasoline prices followed each other closely. The exception was the June refinery outage in Washington State which affected prices in Seattle.

Wholesale gasoline prices in all selected centres were above the 2011 level with increases ranging from 1 to 4 cents per litre.

Figure 4: Wholesale Gasoline Prices (Weekly Average)
Rack Terminals Prices for Selected Cities Ending December 27, 2012
(Can ¢/L)



Sources: NRCan, Bloomberg





Refining and Marketing Margins

Refining margins for gasoline increased in 2012 compared to the previous year. Overall, compared to 2011, average refining margins increased by 5 cents per litre to 20 cents per litre in 2012.

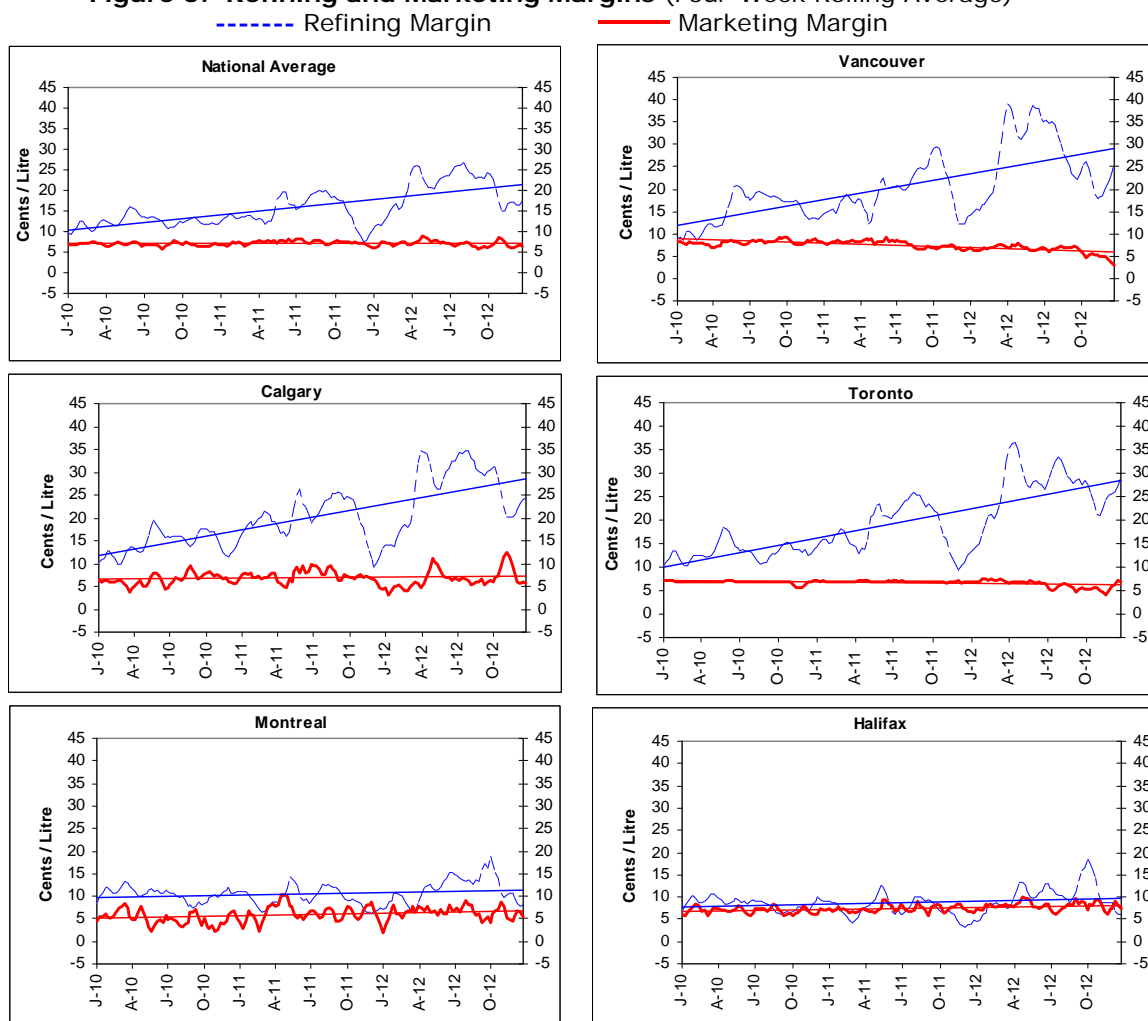
The **four-week rolling national average** refining margins ranged from a low of 10 cents per litre to a high of 27 cents per litre in 2012. In comparison, margins fluctuated in the range of 8 to 20 cents per litre in 2011.

A noteworthy trend in 2012 was the higher refining margins in some selected centres. In 2012, the costs of crude oil feedstocks for refineries in Sarnia and Western Canada declined, as prices fell dramatically in comparison to global crude oil (Brent) prices. As Sarnia and Western Canadian refineries used crude oil from Western Canada, these refineries enjoyed a large feedstock cost advantage versus Eastern refineries, which purchase crude oil at Brent prices. Meanwhile, wholesale gasoline prices remained at similar levels in all selected centres, reflecting the integrated nature of the

continental gasoline market. The refining margins shown here are calculated as the wholesale price of gasoline in an area, less the estimated refinery crude oil price for that area. Since the crude oil cost for Western refineries (Edmonton Par) was less than for Eastern coastal refineries (Brent), the calculated refining margins are much higher for Western Canadian refineries than for those in Eastern Canada. Canadian wholesale prices of refined products are largely determined by wholesale prices in adjacent U.S. regions which are in turn predominantly tied to international product markets.

By comparison, **marketing margins** fluctuated over a narrow range and were much more stable than refining margins. Nationally, the average margin decreased marginally from last year by 0.4 cent per litre to 7 cents per litre. Halifax registered the highest marketing margin at 8 cents per litre while all other centres hovered around 6 cents per litre.

Figure 5: Refining and Marketing Margins (Four-Week Rolling Average)



Source: NRCan





Crude Oil Overview

Average crude oil prices for the three crude oil benchmarks declined in 2012, starting at \$652/m³ (US\$102/bbl) in January and ending the year at \$566/m³ (US\$90/bbl) in December.

In 2012, crude oil prices for the three crude oil benchmarks averaged 612/m³ (US\$97/bbl) a decrease of \$14/m³ (US\$3/bbl) from 2011. The following is a summary of the more significant events affecting the price of crude oil in 2012.

World Crude Oil Prices Mirror the Previous Year: Prices for the three benchmark crudes fluctuated in a narrow range compared to the previous year. Overall, Edmonton Par prices averaged \$542/m³ (US\$86/bbl), a decline of \$56/m³ (US\$10/bbl), while WTI remained almost unchanged from the previous year at \$592/m³ (US\$94/bbl) and Brent prices averaged \$703/m³ (US\$112/bbl), an increase of \$14/m³ (US\$1/bbl). Prices rose gradually in the first two months of the year and declined sharply by June-July. From their lowest point in mid-year, crude oil prices experienced a short rebound in the August to mid-October period only to decline again in the latter part of the year.

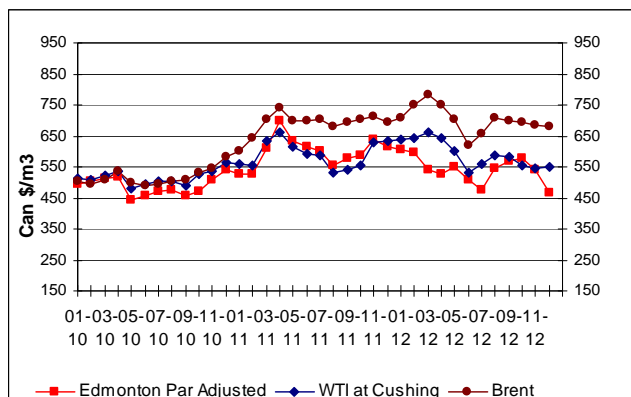
The Crude Oil Price Differential: A significant price gap remained between Brent global crude oil prices and the North American benchmarks. This gap began to develop in late 2010, and the trend observed in 2011 continued in 2012. In 2012, the discount between Edmonton Par and Brent ranged between \$101/m³ and 242/m³ (US\$16 to US\$39 per barrel), while the discount between the WTI and Brent ranged between \$70/m³ to \$143/m³ (US\$11 to US\$23 per barrel). Prior to 2010, prices of Brent, WTI and Edmonton Par - crudes of similar quality - closely tracked each other. In late 2010 and into 2011, crude oil inventories began to build at Cushing, Oklahoma, a major oil trading centre, where

the price for WTI is determined. This buildup was the result of high supplies coming into Cushing, particularly Alberta's oil sands imports, combined with a lack of pipeline capacity to take the oil away from Cushing, such as to the U.S. Gulf Coast. This caused the price of WTI to become discounted compared to global prices such as Brent. In effect, for large parts of North America, from Alberta to Oklahoma, crude oil prices are heavily discounted versus Brent. This situation is due to inadequate pipeline capacity to bring oil from those areas to coastal ports, where the oil could access high-priced global markets by tanker shipment.

Factors Influencing Crude Oil Prices: In 2012, global crude oil prices were influenced early on by Middle-East political tensions threatening an impact on OPEC's production capacity due to sanctions against Iran and concerns over the movement of crude oil through the Strait of Hormuz, both firming up prices. Tensions gradually dissipated and then replaced by concerns over the European sovereign debt crisis and the lackluster economic recovery in the U.S. which remained the dominant factors in moderating the rise in global crude oil prices. These uncertainties, combined with weak economic conditions, contributed to put downward pressure on future oil demand.

U.S. Crude Oil Inventories: U.S. crude oil inventories remained in the upper range of their historical five-year average and above it throughout 2012, further moderating prices. As mentioned above, the over supply of crude oil at central trading hubs, such as Cushing, Oklahoma, and the transportation constraints caused by the pipeline bottleneck leading to the U.S. Gulf Coast contributed to high inventory levels. Other factors include a very moderate economic growth which put downward pressure on oil demand and, in turn, reduced demand for refined petroleum products.

Figure 6: Crude Oil Price Comparisons



Source: NRCan

Changes in Crude Oil Prices

Crude Oil Types	Annual					
	2012		2011		Change	
	\$Can/m ³	\$US/bbl	\$Can/m ³	\$US/bbl	\$Can/m ³	\$US/bbl
Edmonton Par	541.97	86.23	598.04	96.21	-56.07	-9.98
WTI	591.84	94.16	591.02	95.08	+0.82	-0.92
Brent	703.40	111.93	689.73	110.93	+13.67	+1.00





Federal and Provincial Consumption Taxes on Petroleum Products (In Cents/Litre or in % as indicated as of December 31, 2012)

	Gasoline	Diesel	Propane (motor vehicle)	Furnace Oil/ Natural Gas (for heating)
Federal Taxes				
Excise Tax	10.0	4.0	-	-
Goods and Services Tax OR: Harmonized Sales Taxes ⁽¹⁾ in: Newfoundland and Labrador, Ontario and New Brunswick Nova Scotia ⁽²⁾ British Columbia ⁽³⁾	5%	5%	5%	5%
	13%	13%	13%	13%
	15%	15%	15%	5%
	5%	5%	12%	5%
Provincial Taxes				
Newfoundland and Labrador	16.5	16.5	7.0	
Prince Edward Island ⁽⁴⁾	15.8	20.2		
Nova Scotia	15.5	15.4	7.0	
New Brunswick	13.6	19.2	6.7	
Quebec ⁽⁵⁾	18.2	19.2		
Quebec Sales Tax	9.5%	9.5%	9.5%	9.5%
Ontario	14.7	14.3	4.3	
Manitoba	14.0	14.0	3.0	
Saskatchewan	15.0	15.0	9.0	
Alberta	9.0	9.0	6.5	
British Columbia ⁽⁶⁾ Additional Carbon Tax	14.5 6.67	15.0 7.67	4.62	7.67/5.70
Yukon	6.2	7.2		
Northwest Territories ⁽⁷⁾	10.7/6.4	9.1		
Nunavut ⁽⁷⁾	10.7/6.4	9.1		
Transportation Taxes (in addition to federal and provincial taxes)				
Montreal ⁽⁵⁾	3.0			
Vancouver ⁽⁶⁾	11.0	11.0		
Victoria ⁽⁶⁾	3.5	3.5		

Notes:

- Where the HST is in place, the federal portion of the tax is 5%.
- NS has a point of sale tax rebate of the provincial portion of the HST (8%) on furnace oil.
- BC has a point of sale rebate of the provincial portion (7%) of the HST on gasoline, diesel and heating fuels.
- In Prince Edward Island (PEI), gasoline and diesel taxes are adjusted monthly. More detailed information is available on PEI's website at <http://www.taxandland.pe.ca>
- In QC, gasoline, diesel and propane taxes are reduced by varying amounts in certain remote areas and within 20 kilometres of the provincial and U.S. borders. The QC provincial retail sales tax (QST), which is 9.5% as of January 1, 2012, applies to all petroleum products. An urban tax of 3.0 cents per litre is also added to gasoline sold in Montreal and surrounding municipalities.
- BC applies a carbon tax on all fuels. In the Greater Vancouver and Victoria areas, there are additional transportation taxes of 11.0 and 3.5 cents per litre, respectively, on gasoline and diesel. More information is available on BC's website at http://www.sbr.gov.bc.ca/business/Consumer_Taxes/consumer_taxes.htm
- In the Northwest Territories and Nunavut, gasoline is taxed at 6.4 cents per litre in communities not served by a highway system.

Notes:

The order in which taxes are applied is as follows: a) consumption and excise taxes (municipal, provincial and federal) are added to the ex-tax price, then b) the GST/HST is calculated and added onto the sum from a), then c) (in Quebec only) the QST is calculated and added onto the result of b).

