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# Fuel Focus

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

2011 Annual Review

January 13, 2012

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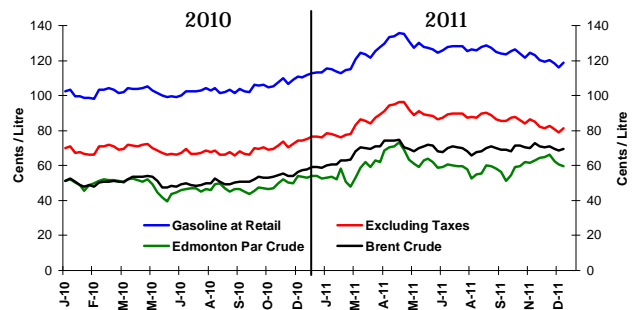
## 2011 Annual Review

*Fuel Focus 2011 Annual Review* summarizes the events that characterized the Canadian retail gasoline market during 2011. 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.

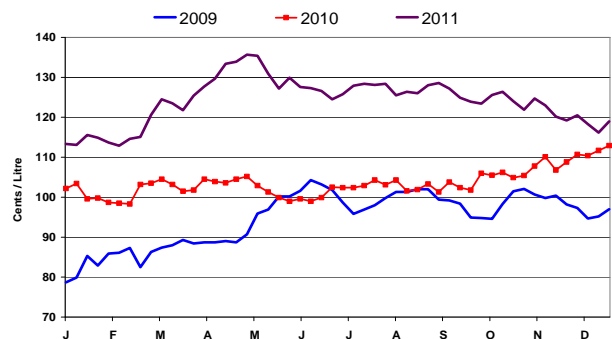
### Highlights

- Canadian retail gasoline prices in 2011 averaged \$1.24 per litre, an increase of 20 cents per litre from 2010. Gasoline prices fluctuated within a range of 23 cents per litre from a low of \$1.13 per litre to a high of \$1.36 per litre in 2011. In comparison, the range was 15 cents per litre from a low of 98 cents per litre to a high of \$1.13 per litre in 2010.
- The year started with gasoline prices at \$1.13 per litre, rising to \$1.36 per litre in May, declining gradually throughout the summer driving season and ending with an upswing to \$1.19 per litre. The Canadian average retail pump price of \$1.24 per litre in 2011 was significantly higher than the average retail pump prices of \$1.04 per litre registered in 2010 and 95 cents per litre in 2009.
- Diesel fuel and furnace oil prices rose by 24 cents per litre to \$1.25 and \$1.13 per litre, respectively. For further comments on the rise in diesel prices, please see the Fuel Focus Supplement, Volume 6, Issue 24 at: <http://www.nrcan.gc.ca/energy/sources/petroleum-crude-prices/gazoline-reports/2011-12-16/2078#supsup>.
- Retail pump prices increased in 2011, compared to 2010, due to higher crude oil prices, increased average refining and marketing costs and margins, and higher provincial taxes.
- Canadian and American wholesale gasoline prices averaged approximately 78 and 76 cents per litre respectively in 2011, compared to 62 and 60 cents per litre respectively in 2010. 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 \$626/m<sup>3</sup> (US\$110/bbl) in 2011—an increase of \$120/m<sup>3</sup> (US\$23/bbl) from 2010. World crude oil prices remained fairly robust compared to previous years mainly due to concerns in oil-producing regions, the European debt situation and uncertainties with respect to global economic recovery.

**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)		
	2011	2010	Change
Gasoline	124.0	103.6	+20.4
Diesel	124.7	100.8	+23.9
Furnace Oil	113.0	88.8	+24.2
Edmonton Par	59.8	48.6	+11.2
Brent	69.2	51.5	+17.7

Source: NRCan

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## Retail Gasoline Overview

The annual average gasoline pump price in the selected cities shown in Figure 3 was \$1.24 per litre in 2011—an increase of 20 cents per litre compared to 2010.

The increase in retail gasoline prices was primarily due to higher crude oil prices. Concerns over the Middle East and North African strife and over the European debt crisis contributed to push prices higher, while the fear of a global economic downturn reducing demand for oil and petroleum products partly moderated the rise.

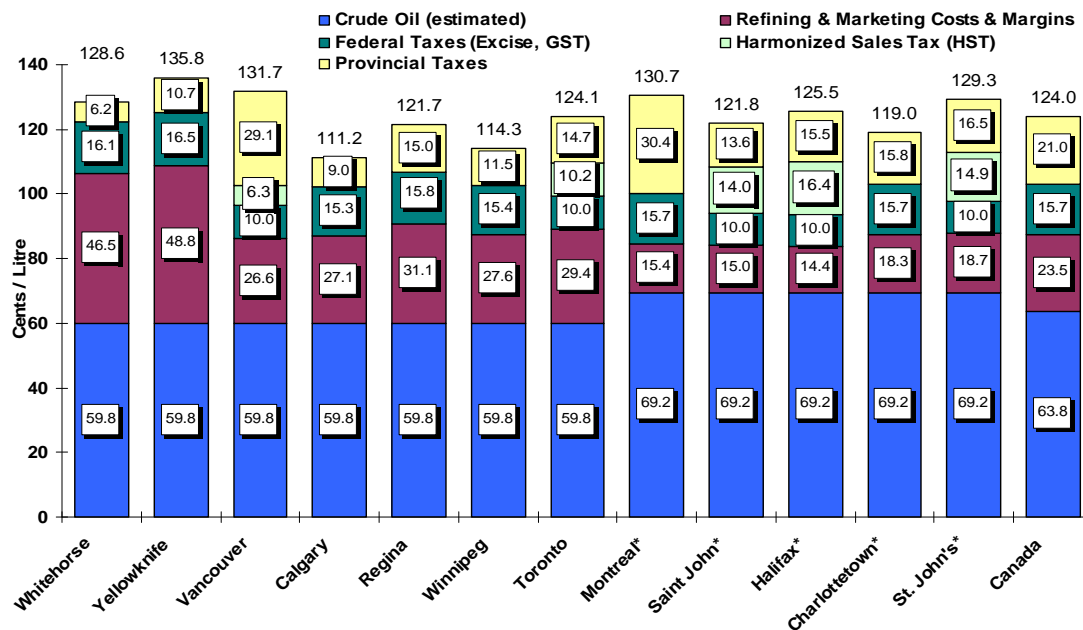
Crude oil, the main pump price component, averaged approximately 64 cents per litre in 2011—an increase of 14 cents per litre from the previous year.

The refining and marketing costs and margins component increased by 3 cents per litre in 2011 to 23 cents per litre.

In 2011, federal and provincial taxes accounted for 37 cents per litre of the average gasoline price at the pump. This represents a 2.5 cent-per-litre increase from 2010.

Montreal average retail gasoline prices increased by nearly 23 cents per litre, mainly due to higher crude oil costs and higher provincial taxes. Toronto average retail gasoline prices increased by 22 cents per litre. Of all the provincial centres, Vancouver registered the lowest price increase at 17 cents per litre.

**Figure 3: Regular Gasoline Pump Prices in Selected Cities  
Annual Average for 2011**



Source: NRCan

\* Regulated Markets

Regular Gasoline Pump Price Components in Selected Cities													
Change in Annual Average for 2011 over 2010 (cents per litre)													
Selected Cities	WH	YK	VA	CY	RE	WG	TO	ML	SJ	HX	CH	SJ's	CA
Provincial Taxes			1.7					4.4	2.9				1.6
HST			3.5				8.3		2.6	3.4		2.2	
Federal Taxes	0.8	0.9	-2.7	0.9	1.0	0.8	-2.3	0.9			0.9		0.9
R & M Costs and Margins	3.9	5.9	3.1	6.0	7.3	4.9	9.0	-0.6	-1.4	-1.4	-0.7	-1.4	3.0
Crude Oil - (Edmonton Par and Brent)	11.4	11.4	11.4	11.4	11.4	11.4	11.4	17.8	17.8	17.8	17.8	17.8	14.2
Retail Pump Prices	16.0	17.1	16.9	18.2	19.6	17.1	22.2	22.6	21.9	19.9	18.0	18.6	20.4

Note: Empty fields indicate no changes from 2010 to 2011. Shaded areas indicate the tax is not applicable. Federal taxes include the excise tax and the GST where applicable. A number of provincial tax changes came into effect in 2010.





## Wholesale Gasoline Prices

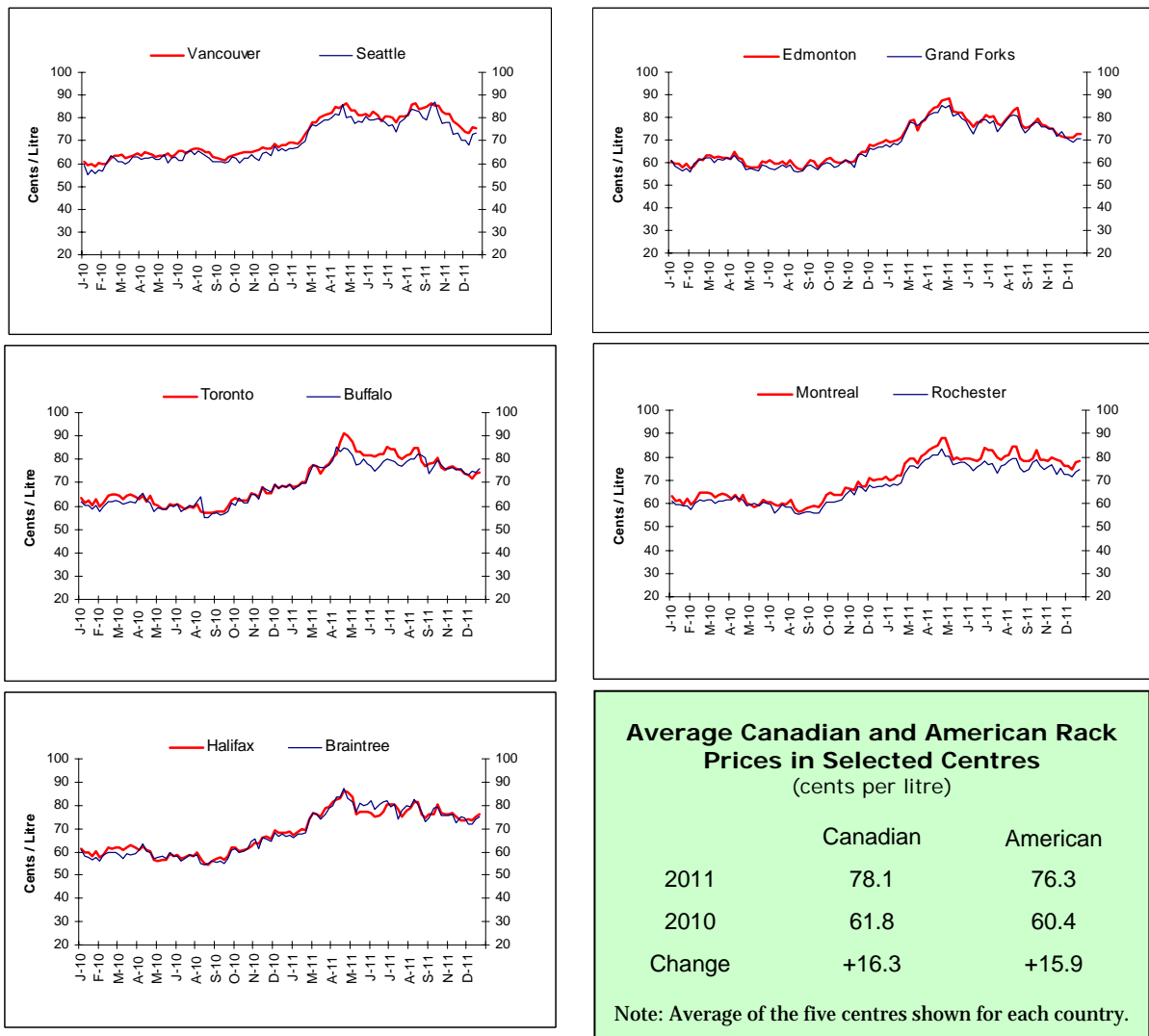
In 2011, wholesale gasoline prices in Canada and the U.S. followed similar trends, with the annual average in Canada at 78 cents per litre being slightly higher than the 76 cents per litre in selected American centres.

Overall, the increase in wholesale prices reflected the rise in world crude oil prices and the increase in gasoline demand on the continental North American market.

Wholesale gasoline prices fluctuated between approximately 88 and 69 cents per litre in the Canadian markets and between 85 and 67 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.

Wholesale gasoline prices in all selected centres were above the 2011 level with increases ranging from 14 to 17 cents per litre.

**Figure 4: Wholesale Gasoline Prices (Weekly Average)**  
Rack Terminals Prices for Selected Cities Ending December 29, 2011  
(Can ¢/L)



Sources: NRCan, Bloomberg





## Refining and Marketing Margins

**Refining margins for gasoline** increased in 2011 compared to the previous year. Overall, compared to 2010, average refining margins increased by 3 cents per litre to 15 cents per litre in 2011.

The **four-week rolling national average** refining margins ranged from a low of 8 cents per litre to a high of 20 cents per litre in 2011. In comparison, margins fluctuated in the range of 9 to 16 cents per litre in 2010.

Refinery margins remained relatively flat in the first five months of 2011. Margins rose in June with the traditional summer driving season which is indicative of a sustained demand for gasoline. Margins dropped by the end of the year, indicating that wholesale prices were decreasing more promptly than crude oil prices. Overall, more than adequate gasoline and crude oil inventories in the U.S. moderated the rise in refining margins.

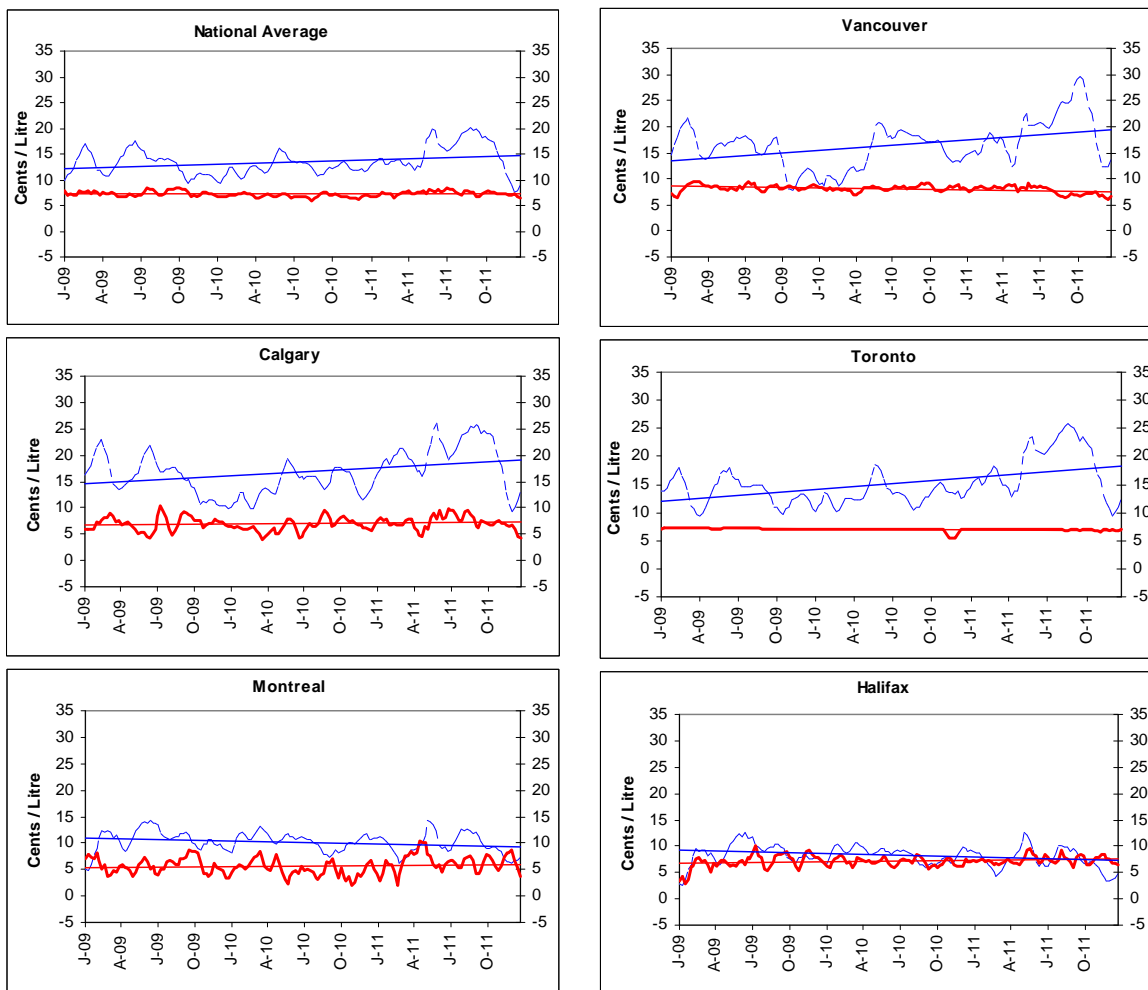
This year's refinery margins were higher than the previous year, but mainly because of the muted economic recovery in 2010. In addition, there were few market supply constraints and refining margins reflected a mostly balanced supply and demand situation.

By comparison, **marketing margins** fluctuated over a narrow range and were much more stable than refining margins. Nationally, the average margin increased from last year by nearly 1 cent per litre to 7 cents per litre. Vancouver registered the highest marketing margin at 8 cents per litre and Montreal the lowest at 6 cents per litre. The other three centres hovered at 7 cents per litre.

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

----- Refining Margin

———— Marketing Margin



Source: NRCan





## Crude Oil Overview

Average crude oil prices for the three crude oil benchmarks rose in 2011, starting at \$562/m<sup>3</sup> (US\$90/bbl) in January and ending the year at \$648/m<sup>3</sup> (US\$102/bbl) in December. Prices climbed to their highest levels since 2008, peaking in April at \$650/m<sup>3</sup>. While Edmonton Par and WTI prices declined in the latter part of the year, and moved back up in November and December, Brent oil prices also declined, but at a slower pace.

In 2011, crude oil prices for the three crude oil benchmarks averaged 626/m<sup>3</sup> (US\$110/bbl) an increase of \$120/m<sup>3</sup> (US\$23/bbl) from 2010. The following is a summary of the more significant events affecting the price of crude oil in 2011.

**World Crude Oil Prices Firmed Up:** 2011 was characterized by a firm upward trend in world crude oil prices compared to the previous year. Prices for the three benchmark crudes rose at a steady pace throughout the first half of the year. However, by mid-year the WTI and Edmonton Par crudes started to decline while Brent prices moderated more slowly causing a price differential of more than US\$20 per barrel at one point. While global economic uncertainties dominated the concerns during the year, world crude oil prices showed strong resilience in the face of these problems.

**The Different Benchmarks - Brent and WTI:** A significant event in 2011 was the widening price gap between marker crude prices. Brent, or Brent blend, is a combination of crudes from 15 different oil fields in the North Sea. WTI, which is the underlying commodity of the New York Mercantile Exchange's oil futures contracts, is a similar quality crude from West Texas. Historically, the two world benchmarks tracked each other, but several factors in 2011 pushed the two oil markers apart. Initially the divergence was caused by the inability of the U.S. mid-west WTI crude oil to reach world markets due to supply pipeline constraints, creating a significant gap between the Brent price and the leading benchmark. The unusual price dichotomy was caused by a land-locked supply situation for the WTI, and an increase in demand for crude oil

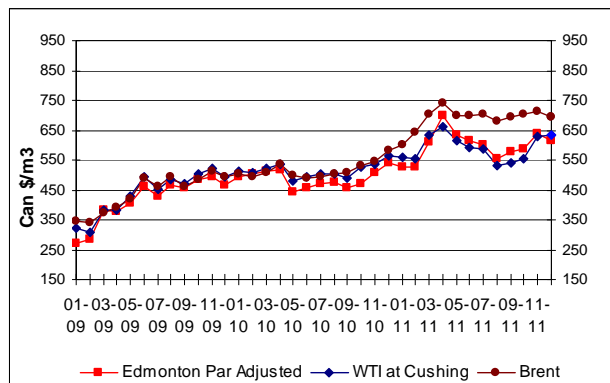
worldwide. As Brent is moved by tanker, it could access global oil markets, and received a higher price.

The impact was felt by some refineries in Ontario, and all refineries in Quebec and the Atlantic Provinces, as they purchase mainly imported or Newfoundland offshore crudes. These refineries purchase crudes from the North Sea, Newfoundland offshore, the Middle East, the U.S., and other sources. Currently, roughly 60% of the crude oil processed by Canadian refineries is domestic crude, while 40% is imported crude.

**Geopolitical Activities and Global Economic Uncertainty:** Geopolitical concerns in the Middle East and in North Africa caused prices to firm up early in the year. While prices moderated in the later part of year, they remained affected by concerns over the European debt crisis, the reduced Libyan oil output and the fear of a global economic downturn reducing demand for oil and petroleum products. Global economic uncertainties, such as the lackluster U.S. economy, the euro zone debt crisis, and Japan's tsunami and its nuclear fallout, all contributed to weaken oil demand. High levels of OPEC spare oil production capacity give energy markets comfort that supply can be maintained, and demand can be met, moderating price increases. Declines in OPEC's crude oil spare capacity levels throughout the year contributed to firm up prices.

**World Oil Outlook:** The market outlook for world oil prices seems to be for higher price volatility in 2012. According to the U.S. Energy Information Administration Short-Term Market Outlook, there is a large upside and downside price risk for world crude oil. Ongoing uncertainties in oil-producing regions, such as the Iranian nuclear program, and additional unrest in the Middle East and in North African countries could push prices up. On the other hand, downward pressure on prices as a result of the economic slowdown in advanced economies, the fallout of the debt crisis on the European Union and the ramp-up of Libyan oil production could add more oil supply, and result in falling prices.

Figure 6: Crude Oil Price Comparisons



Changes in Crude Oil Prices

Crude Oil Types	Annual					
	2011		2010		Change	
	\$Can/m <sup>3</sup>	\$US/bbl	\$Can/m <sup>3</sup>	\$US/bbl	\$Can/m <sup>3</sup>	\$US/bbl
Edmonton Par	598.04	96.21	487.71	75.31	+110.33	+20.90
WTI	591.02	95.08	514.51	79.45	+76.51	+15.63
Brent	689.73	110.93	516.45	79.77	+173.28	+31.16

Source: NRCan





## Federal and Provincial Consumption Taxes on Petroleum Products

(In Cents/Litre or in % as indicated as of December 31, 2011)

	Gasoline	Diesel	Propane (motor vehicle)	Furnace Oil/ Natural Gas (for heating)
<b>Federal Taxes</b>				
Excise Tax	10.0	4.0	-	-
Goods and Services Tax	5%	5%	5%	5%
OR: Harmonized Sales Taxes <sup>(1)</sup> in: Newfoundland and Labrador, Ontario and New Brunswick	13%	13%	13%	13%
Nova Scotia <sup>(2)</sup>	15%	15%	15%	5%
British Columbia <sup>(3)</sup>	5%	5%	12%	5%
<b>Provincial Taxes</b>				
Newfoundland and Labrador	16.5	16.5	7.0	
Prince Edward Island <sup>(4)</sup>	15.8	20.2		
Nova Scotia	15.5	15.4	7.0	
New Brunswick	13.6	19.2	6.7	
Quebec <sup>(5)</sup>	17.2	18.2		
Quebec Sales Tax	8.5%	8.5%	8.5%	8.5%
Ontario	14.7	14.3	4.3	
Manitoba	11.5	11.5	3.0	
Saskatchewan	15.0	15.0	9.0	
Alberta	9.0	9.0	6.5	
British Columbia <sup>(6)</sup>	14.5	15.0		
Additional Carbon Tax	5.56	6.39	3.85	6.39/4.75
Yukon	6.2	7.2		
Northwest Territories <sup>(7)</sup>	10.7/6.4	9.1		
Nunavut <sup>(7)</sup>	10.7/6.4	9.1		
<b>Transportation Taxes (in addition to federal and provincial taxes)</b>				
Montreal <sup>(5)</sup>	3.0			
Vancouver <sup>(6)</sup>	9.0	9.0		
Victoria <sup>(6)</sup>	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 set to increase to 9.5% on 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 9.0 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](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).

For example, in Ontario the average ex-tax gasoline price in 2011 was 79 cents per litre + 14.7 cents per litre consumption tax = 93.7 cents per litre + 10 cents excise tax = 103.7 cents per litre + 13% of 103.7 = 117 cents.

In B.C. the ex-tax gasoline price was 80 cents per litre + 14.5 consumption tax = 94.5 cents + 10 cents excise tax = 104.5 cents + 5.56 cents carbon tax of 104.5 cents = 110 cents + 9 cents transportation tax (Vancouver) = 119 cents + 5% GST (federal portion) of 119 cents = 125 cents per litre. Quebec: 80 cents per litre ex-tax + 17.2 cents consumption tax = 97.2 cents + 10 cents excise tax = 107.2 cents + 3 cents transportation tax (Montreal) = 110 cents + 5% GST of 110 cents = 116 cents + 8.5% QST of 116 cents = 126 cents per litre (all numbers are approximate and rounded).

