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Fuel Focus

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

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National Overview

The Canadian retail gasoline price declined for the second straight week, by 5 cents to \$1.23 per litre—an 11-month low. This represents a decrease of almost 2 cents per litre from last year at the same period.

Pump prices were driven down by lower wholesale gasoline prices across North America, which in turn weakened with lower crude oil prices.

Diesel fuel prices declined by 1 cent to \$1.27 per litre, down nearly 3 cents from the same period last year. Furnace oil prices declined by 2 cents per litre from last week, ending at \$1.23 per litre, an increase of almost 4 cents per litre from a year ago.

Recent Developments

- Canadian Crude Oil Export by Rail Increase:** Canadian exports of crude oil by rail rose 73% in the first six months of 2014 to 1.3 million cubic metres (8.1 million barrels) from the same period a year earlier. From 2012 to 2013, crude oil by rail in Canada increased by 4.7 million cubic metres (30 million barrels). (Source: National Energy Board, Canadian Crude Oil Exports by Rail - Quarterly Data)
- U.S. Crude-Oil Rail Deliveries Continue to Increase:** The amount of crude oil and refined petroleum products moved by U.S. railroads increased 9% during the first seven months of this year compared with the same period in 2013. In July, monthly average carloadings of oil and petroleum products were near 16,000 carloads per week, according to the Association of American Railroads (AAR). The Bakken Shale, primarily in North Dakota, has provided a significant share of the total increase in U.S. oil production over the past three years. Between 60% and 70% of the more than 1 million barrels per day of oil produced in the state has been transported to refineries by rail each month in the first half of 2014, according to the North Dakota Pipeline Authority. (Source: Energy Information Administration, *Today in Energy*)
- New Motor Vehicle Sales:** The number of new motor vehicles (passenger and light trucks) sold in Canada from January to July 2014 rose by nearly 42,000 units (+4%) to 1.1 million units compared to the same period in 2013. The sales value rose to \$38 billion, or \$2.2 billion (+6%) in the first seven months of 2014, over the similar period in 2013. (Source: The Daily, Table 079-0003)

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

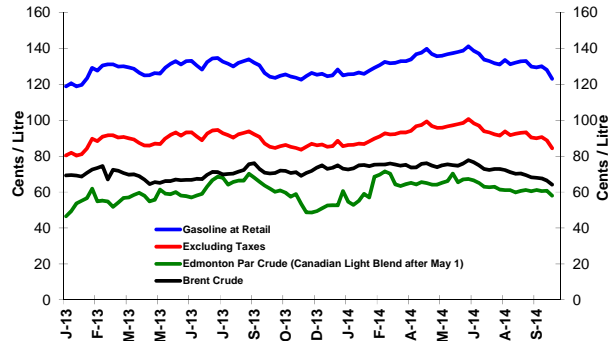
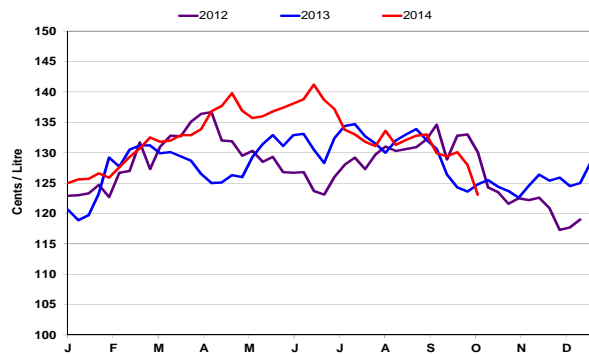


Figure 2: Weekly Regular Gasoline Prices



Changes in Fuel Prices

¢/L	Week of:	Change from:	
	2014-10-14	Previous Week	Last Year
Gasoline	123.1	-4.9	-1.7
Diesel	126.7	-1.1	-2.5
Furnace Oil	123.0	-1.7	+3.5

Source: NRCan

Natural Gas Prices for Vehicles

2014-10-14	¢/kilogram	¢/L gasoline equivalent	¢/L diesel equivalent
Vancouver	119.9	79.1	82.0
Edmonton	115.1	75.9	78.7
Toronto	128.4	84.7	87.8

Source: ¢/kg Kent Marketing Services Limited

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Retail Gasoline Overview

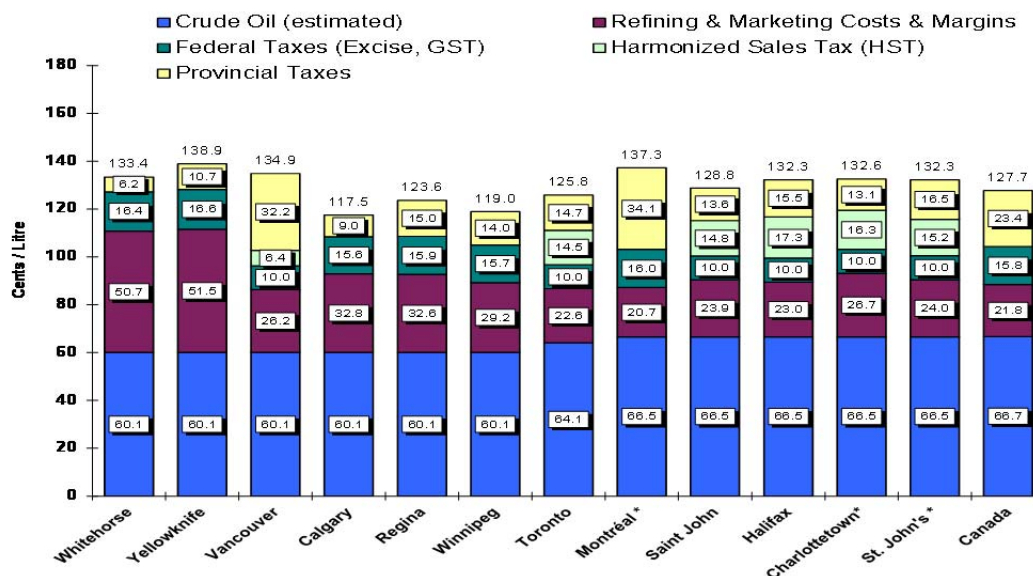
For the period ending October 14, 2014, the **four-week average** regular gasoline pump price in selected cities across Canada was \$1.28 per litre. Compared to the same period in 2013, the average Canadian pump price is 3 cents per litre higher.

The **four-week average** crude component was 67 cents per litre, a decline of 1 cent compared to two weeks ago. However, the crude oil price component of gasoline has increased by 1 cent per litre over this same period in 2013.

Retail gasoline prices in most Western centres declined, on average, by 3 cents per litre when compared to the previous report, ranging from \$1.17 to \$1.35 per litre. Prices in Eastern cities decreased on average by 1.5 cents per litre, and ranged from \$1.26 to \$1.37 cents per litre.

At the national level, industry margins have decreased by 1.5 cents per litre to 22 cents per litre since the last report. Refining margins are higher by 1 cent per litre compared to last year at this time.

Figure 3: Regular Gasoline Pump Prices in Selected Cities Four-Week Average (September 23 to October 14, 2014)



Source: NRCan

* Regulated Markets

Note: Toronto crude oil cost includes pipeline tolls of \$4 per barrel for light crude oil from Edmonton to Sarnia, Ontario.

Examination of Canadian Oil Industry Subsidies

In a recent study by the Université de Montréal Economic Institute called “Is the Canadian Oil Industry Subsidized?” the author Youri Chassin examined whether the Canadian oil and gas industry is subsidized and what is meant when talking about the oil industry subsidization.

While some oil producing countries, such as Iran, Saudi Arabia, Russia, and Venezuela, do subsidize the consumption of fossil fuels in order to maintain prices below market prices, this type of consumption of fossil fuels subsidies does not exist in Canada. On the contrary, the use of these energy sources is routinely taxed, which discourages consumption, unlike a grant. Often, elements that are identified as subsidies are actually particular tax treatments that are common to the natural resources sector as a whole.

With regards to actual subsidy programs, the largest of these are in the process of being eliminated, and will disappear within the next two years. Their elimination means that of the approximately \$211 million of subsidies that currently exist, just \$71 million will remain as of 2016.

Source: Montreal Economic Institute (in French) http://www.iedm.org/files/note0414_fr.pdf ; Canadian Fuels Association (English summary) <http://www.iedm.org/fr/48752-oil-industry-subsidies-a-reality-check>.





Wholesale Gasoline Prices

For the week **ending October 9, 2013**, wholesale gasoline prices decreased in all of the selected Canadian and American centres compared to the previous week.

Overall, wholesale prices decreased in the range of less than 1 cent per litre to almost 10 cents per litre. Prices ended the period in the 62 to 79 cent-per-litre range.

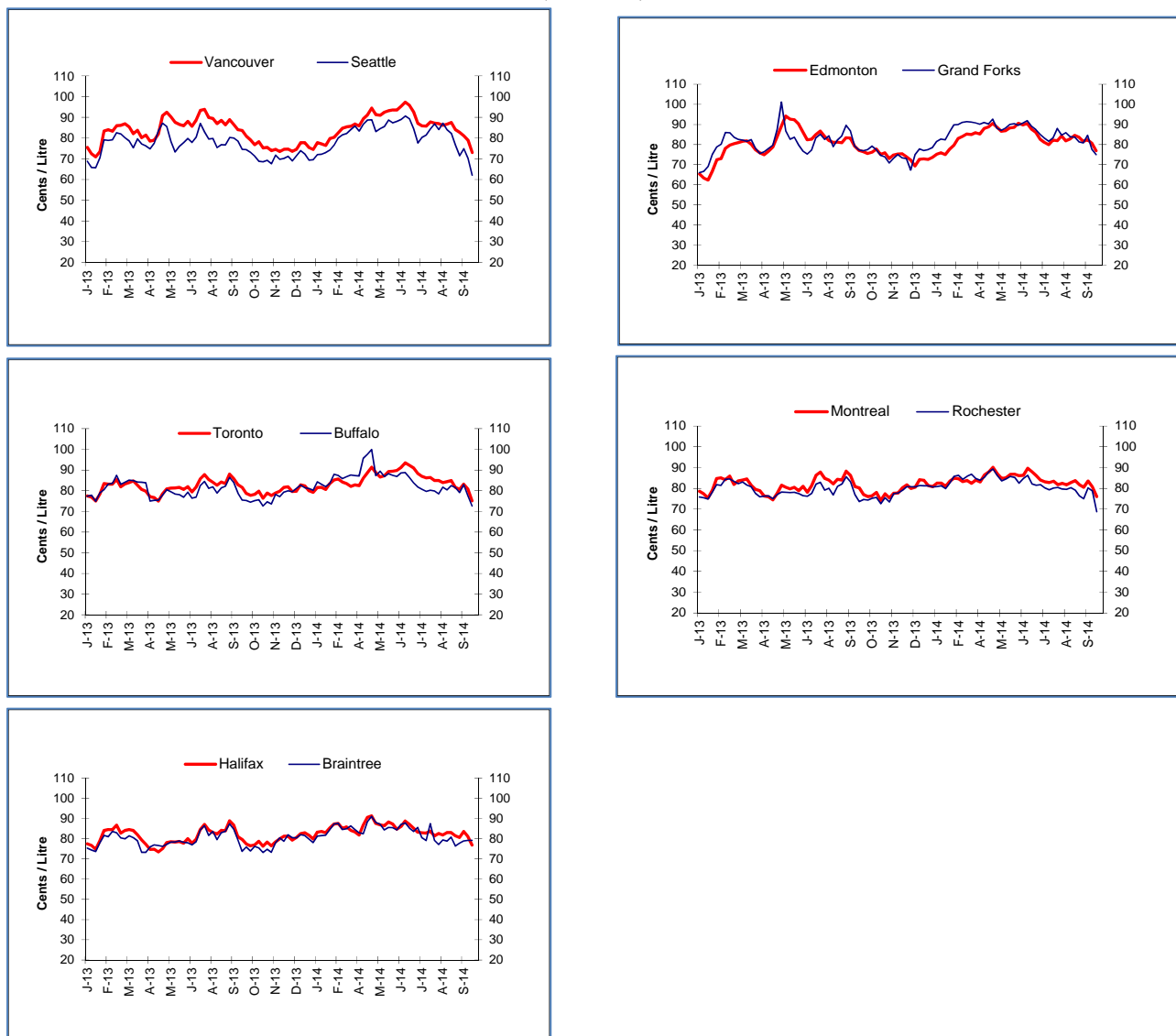
Wholesale gasoline prices in the Eastern centres for both Canada and the U.S. decreased in the range of

less than 1 cent per litre to nearly 10 cents per litre, ending the period in the 69 to 79 cent-per-litre range.

In the Western centres, price changes declined in the range of 3 to 8 cents per litre, closing at 62 to 77 cents per litre.

Compared to last year at the same time, wholesale gasoline price changes in Canadian and American centres ranged from a decrease of more than 9 cents per litre to an increase of 3 cents per litre.

Figure 4: Wholesale Gasoline Prices
Rack Terminal Prices for Selected Canadian and American Cities Ending October 9, 2014
(CAN ¢/L)



Sources: NRCan, Bloomberg Oil Buyers Guide





Gasoline Refining and Marketing Margins

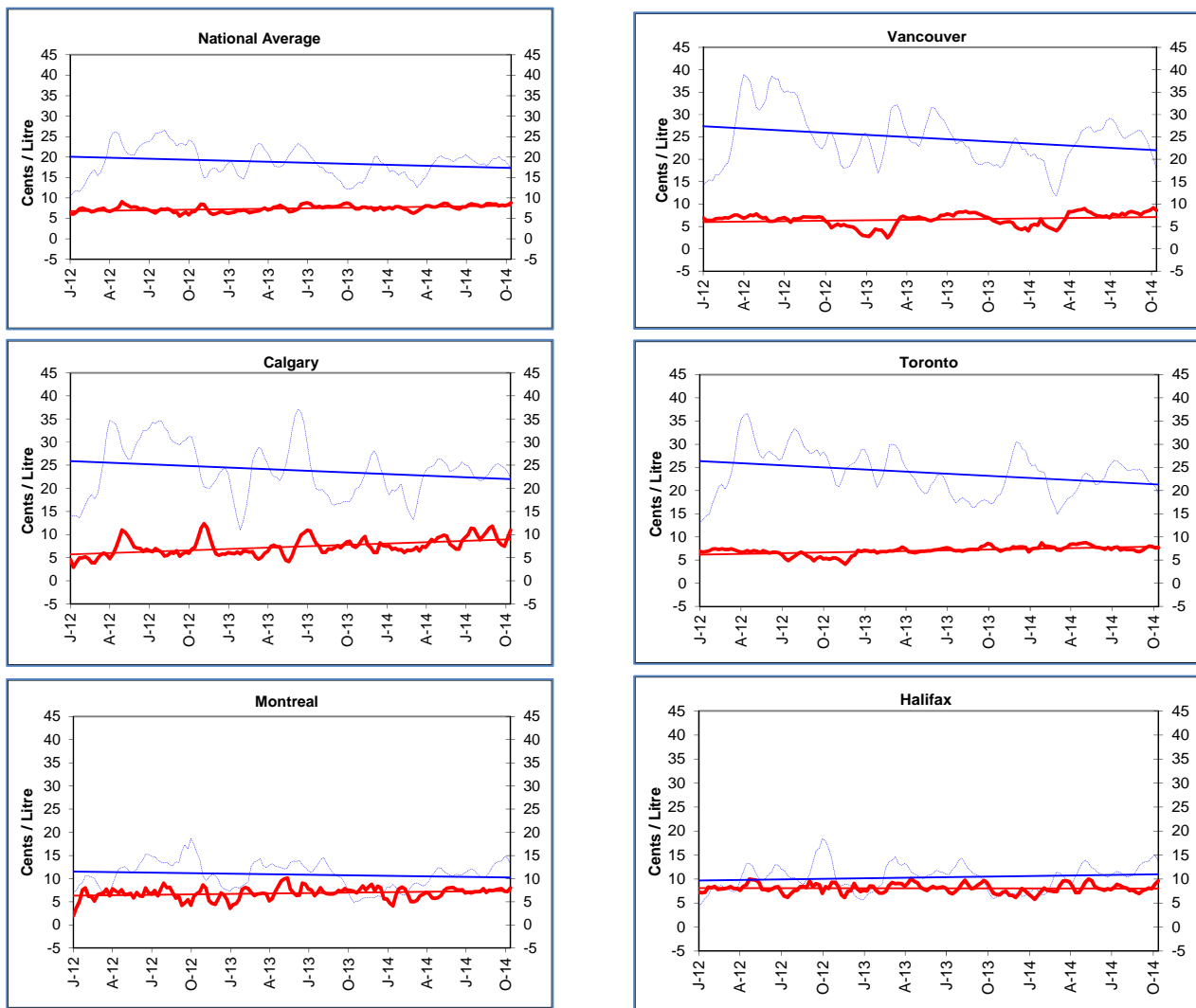
Four-week rolling averages are used for gasoline refining and marketing margins.

Refining margins continue to move downward in all selected centres. This downward trend reflects the decrease in demand for gasoline with adequate supply in the distribution system. For the four-week period ending October 14, 2014, refiners' margins were above last year's level by 4.5 cents per litre.

The downward pressure on wholesale gasoline prices were more significant than the decline in crude oil prices and contributed to the decline in refining margins.

Overall, marketing margins hovered at around 9 cents per litre. Marketing margins for the five centres ranged from a low of less than 7 cents per litre and to a high of 11 cents per litre.

Figure 5: Gasoline Refining and Marketing Margins
Four-Week Rolling Average Ending October 14, 2014
----- Refining Margin — Marketing Margin



Source: NRCan





Crude Oil Overview

Global Crude Oil Prices Decline on Lower Demand and Ample Supply

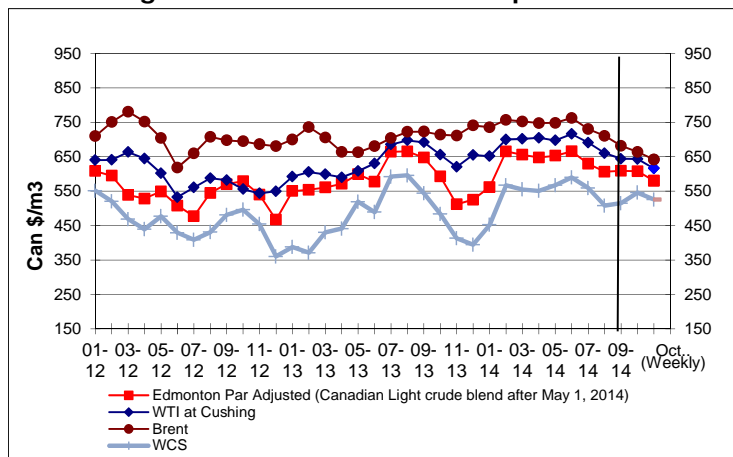
For the week ending **October 10, 2014**, prices for the three marker light crudes averaged between \$580/m³ and \$642/m³ (US\$83 to US\$91 per barrel). Prices for the light crude benchmark dropped, compared to last week, in the range of \$22/m³ to \$28/m³ (US\$3 to US\$4 per barrel)—a four-month low for Brent and WTI.

The price of Brent crude oil continues to trade at a premium to WTI. For the week ending October 10, 2014, the price differential averaged \$26/m³ (US\$4 per barrel).

The Brent waterborne crude oil prices declined on lower demand forecasts and increased Libyan oil output production on international energy markets. Some analysts expect that OPEC might decide, at their next meeting in November, to cut oil production to help support oil prices.

U.S. crude oil inventories continue to climb and are in the upper range of their five-year historical average, putting downward pressure on prices. The Canadian light sweet crude oil price also weakened due to the declining value of the Canadian dollar vs. the U.S. dollar, as more Canadian dollars are needed to purchase goods (crude oil) valued in U.S. dollars.

Figure 6: Crude Oil Price Comparisons



Short-Term Energy and Winter Fuels Outlook

The U.S. Energy Information Administration (EIA) projects average U.S. household expenditures for natural gas, heating oil, electricity, and propane will decrease this winter heating season (October 1 through March 31) compared with last winter, which was 11% colder than the previous 10-year average nationally. Projected average household expenditures for propane and heating oil are 27% and 15% lower, respectively, because of lower heating demand and prices.

Driven in large part by falling crude oil prices, U.S. regular gasoline retail prices fell to an average of \$3.41/gallon (gal) in September, 29 cents below the June average. U.S. regular gasoline retail prices are projected to continue to decline to an average of \$3.14/gal in December. EIA expects U.S. regular gasoline retail prices, which averaged \$3.51/gal in 2013, to average \$3.45/gal in 2014 and \$3.38/gal in 2015.

EIA projects that Brent crude oil prices will average \$98/bbl in fourth quarter 2014 and \$102/bbl in 2015. The WTI discount to Brent, which averaged \$11/bbl in 2013, is expected to average \$7/bbl in both 2014 and 2015.

Source: EIA, <http://www.eia.gov/forecasts/steo/>

Changes in Crude Oil Prices

Crude Oil Types	Week Ending: 2014-10-10		Change From:			
			Previous Week		Last Year	
	\$Can/ m ³	\$US/ bbl	\$Can/ m ³	\$US/ bbl	\$Can/ m ³	\$US/ bbl
Canadian Light	580.25	82.56	-27.42	-3.80	-30.06	-11.09
WTI	615.77	87.62	-27.60	-3.82	-55.81	-15.44
Brent	641.70	91.31	-22.14	-3.04	-65.96	-17.28
WCS	525.60	74.79	-20.25	-2.79	+70.05	+4.88

Source: NRCan





Regional Gasoline Price Differences Explained

Figure 3 on page 2 of the report shows our crude oil price estimate for gasoline refined and then sold at various cities in Canada. The crude oil component for each location in Figure 3 is estimated based on the geographical location and our assumptions about the crude oil supplies, from either domestic or foreign sources, for the nearest refinery.

Canada's crude oil market is divided between refiners in western Canada (Sarnia and points west) using domestic crude oil prices at similar levels to West Texas Intermediate (WTI), while refiners in Eastern Canada (Nanticoke refinery in Ontario, Montreal and points east), which rely mainly on imported crudes, purchased at prices similar to those of North Sea Brent crude.

In order to show more accurate crude oil costs, the crude oil estimates reflect our assumptions about the most likely crude sources and prices, and the transportation costs (pipeline tolls) of shipping the crude oil from the selling point to the relevant refinery. Increasingly, even these refineries are using Canadian or U.S. crudes, delivered by rail. Later this fall, when the reversal of Enbridge's Line 9B from North Westover, Ontario, to Montreal, starts shipping domestic crude oil to refineries in Quebec, the crude oil price estimate for Montreal will be adjusted accordingly. Other centres east of Montreal will continue to reflect the Brent crude oil price.

The table below summarizes the elements that characterize the pump price components of each regions and the impact on gasoline prices.

Yellowknife / Whitehorse	<ul style="list-style-type: none"> - Gasoline supplied from Edmonton refineries. - Products are railed to Hay River and moved further north by barge in the summer or ice road in the winter. Yukon – product is barged to Skagway, Alaska and trucked to Whitehorse. - Crude oil equal to Edmonton Par (Canadian Light Sweet) - Transportation cost to retail centres is high as reflected in the refining and marketing margins. - Yukon has the lowest gasoline taxes of any jurisdiction in Canada (17% compared to 30% for the national average).
Vancouver	<ul style="list-style-type: none"> - Gasoline supplied from Edmonton via Trans Mountain Pipeline - Crude oil equal Edmonton Par (Canadian Light Sweet) - Pipeline toll of \$2.70 per barrel reflected in higher refining and marketing margins. - Taxes are 34% of the total retail pump price.
Calgary	<ul style="list-style-type: none"> - Gasoline supplied from Edmonton - Lower transportation cost. - Relatively low refining and marketing cost compared to other western provinces. - Taxes are 21% of the total retail pump price.
Montreal	<ul style="list-style-type: none"> - Gasoline supplied from refineries in Montreal and Levis, Quebec. - Crude oil cost equal to Brent or Edmonton Par by rail. - High crude oil costs push retail prices up. - Taxes are 36% of the total retail pump price.
Atlantic Provinces	<ul style="list-style-type: none"> - Gasoline supplied by refineries in Come-By-Chance, Newfoundland and Labrador and Saint John, New Brunswick. - Crude oil cost equal to Brent or Edmonton Par by rail to Saint John. - High crude oil costs push retail prices up. - The combined taxes for the Atlantic Provinces are 31% of the total retail pump price.

