## Fuel Focus

Understanding Gasoline Markets in Canada and Economic Drivers Influencing Prices

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## National Overview

Canadian Retail Gasoline Prices Increased 1 Cent per Litre from Last Week

Canadian retail pump prices, for the week ending September 6, 2011, increased by almost 1 cent per litre to reach $\$ 1.29$ per litre-a 3 month high. This week's rise in retail gasoline prices has been driven by higher wholesale gasoline and crude oil prices.
The Canadian retail pump price is 27 cents per litre higher than a year ago when the price of crude oil declined on higher than normal inventories and softening demand in the U.S.

Diesel fuel prices increased by 2 cents per litre to $\$ 1.24$ per litre from the previous week, but are 24 cents per litre higher from the same period last year. Furnace oil prices are up by 3 cents per litre compared to last week, and are 24 cents per litre higher from this time last year.

## Recent Developments

- U.S. Gasoline Consumption Down: U.S. gasoline consumption in the first six months of 2011 was 2 percent lower than during the same period in 2010. Economic growth, gasoline prices, and vehicle fleet efficiency are three key determinants of gasoline use. Economic growth and prices impact vehicle miles traveled, while fleet efficiency, which changes only slowly based on the efficiency of new vehicles relative to the efficiency of the existing fleet and the rate of fleet turnover, links miles traveled to fuel use. Higher gasoline prices in 2011 compared to the same period in 2010 appear to be the main driver behind the recent drop in gasoline demand. (Source: EIA, http:// www.eia.gov/ oog/info/ twip/ twip.asp )
- Oil and Gas Capital and Operating Expenditures: Capital expenditures by the conventional oil and gas extraction industry totalled $\$ 35.2$ billion in 2010, up $60.5 \%$ from 2009. Non-conventional sector capital expenditures increased $51.1 \%$ to $\$ 17.7$ billion in 2010. This marks the sixth year in a row that expenditures have surpassed $\$ 10$ billion in the non-conventional sector. Operating expenses for the conventional sector rose $6.5 \%$ from 2009 to $\$ 25.3$ billion in 2010, the result of higher royalty payments and operating costs. For the nonconventional sector, operating expenses increased $14.2 \%$ from 2009 to $\$ 16.1$ billion in 2010, also principally the result of higher royalty payments and operating costs. (Source: The Daily, http:// www.statcan.gc.ca/ dailyquotidien/ 110901/dq110901a-eng.htm )

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


Figure 2: Weekly Regular Gasoline Prices


Changes in Fuel Prices

|  | Week of: | Change from: |  |
| :--- | :---: | :---: | :---: |
| $\Phi / \mathrm{L}$ | $2011-09-06$ | Previous <br> Week | Last <br> Year |
| Gasoline | 128.6 | +0.6 | +27.3 |
| Diesel | 123.8 | +2.1 | +24.0 |
| Furnace Oil | 113.1 | +2.8 | +24.1 |

Source: NRCan

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## Retail Gasoline Overview

The average Canadian pump price in selected cities for the four-week average ending September 6, 2011, was $\$ 1.27$ per litre-an increase of 1 cent per litre from the last report on August 26, 2011. This represents a 25 cent-per-litre increase compared to the same period in 2010.

Overall, compared to two weeks ago, the four-week average crude oil prices declined by less than 1 cent per litre to 56 cents per litre. However, this refers to Edmonton Par crude. Some Canadian refineries purchase crude supplies at prices most closely linked to Brent crude prices. We will be addressing this factor in future issues of the Fuel Focus.

Retail gasoline prices in Eastern centres declined on average by nearly 1 cent per litre, compared to the last report two weeks ago, and ranged from $\$ 1.20$ to $\$ 1.29$ per litre. Prices in Western centres increased, on average, by 1 cent per litre and ranged from $\$ 1.14$ to \$1.34 per litre.

At the national level, refining and marketing costs rose by 1 cent per litre from the previous report of two weeks ago to 33 cents per litre.

Figure 3: Regular Gasoline Pump Prices in Selected Cities Four-Week Average (August 16 to September 6, 2011)


Source: NRCan

* Regulated Markets


## I nflation Up Nearly 3\% in July 2011

Statistics Canada's Consumer Price Index (CPI) report released on August 19, 2011, indicates that prices rose $2.7 \%$ in the 12 months to July, primarily the result of higher prices for gasoline and food purchased from stores. This follows a 3.1\% increase in J une and a 3.7\% advance in May.

On July 1, 2010, the Harmonized Sales Tax (HST) came into effect in Ontario and British Columbia. As well, Nova Scotia increased its HST by two percentage points. Energy prices advanced 12.9\% during the 12 months to J uly, following a $15.7 \%$ increase in J une. On a year-over-year basis, gasoline prices rose $23.5 \%$, compared to the $28.5 \%$ gain in J une. In contrast, natural gas prices fell.

On a seasonally adjusted monthly basis, consumer prices increased $0.1 \%$ from J une to July, following a $0.3 \%$ decrease from May to J une. The transportation index, which includes gasoline, remained unchanged following a 2.4\% decline in J une.

Source: Statistics Canada, Consumer Price Index, http://www.statcan.gc.ca/ subjects-sujets/ cpi-ipc/ cpi-ipc-eng.htm

## Wholesale Gasoline Prices

For the week ending September 1, 2011, wholesale gasoline prices increased in most Canadian and American centres compared to the previous week.

Wholesale gasoline price changes ranged from an increase of 4 cents per litre to a decrease of 1 cent per litre. Prices ended the period in the 79 to 86 cent-perlitre range.

In the Eastern markets of Canada and the U.S., wholesale gasoline prices, compared to the previous week, ranged from an increase of 3 cents per litre to a decrease of 1 cent per litre. Prices ended the period in the 79 to 86 cent-per-litre range.

Wholesale gasoline prices in the Western centres registered increases ranging from less than 1 cent per litre to more than 4 cents per litre, ending in the range of 81 to 86 cents per litre. The gap between Portland and Halifax observed in the last few weeks has narrowed to less than 5 cents per litre.

Earlier in the year, wholesale gasoline prices had increased compared to last year, when crude oil prices remained fairly stable. Now, however, higher crude prices have firmed up wholesale and retail prices.

## Figure 4: Wholesale Gasoline Prices

Rack Terminal Prices for Selected Canadian and American Cities Ending September 1, 2011 (Can $\ddagger /$ L)


Sources: NRCan, Bloomberg Oil Buyers Guide



## Branded vs. I ndependent Dealers

Branded dealers have an advantage over the independents during a price war. Independents must purchase product from a terminal at a posted rack (wholesale) price or with minimal discount and are, therefore, not in a position to provide financial relief to their dealers. Branded dealers, on the other hand, can sometimes obtain an undisclosed discount off the rack price that may better enable them to survive the effects of a prolonged price war.

## Gasoline Refining and Marketing Margins

Four-week rolling averages are used for the gasoline refining and marketing margins. After experiencing a decline in the latter part of 2009 and early 2010, refining margins have rebounded since then, now averaging around 23 cents per litre across Canada.

Refining margins reflect market conditions. The average refining margins to date this year are 11 cents per litre higher than the previous year at the same time. The gradual increase in refining margins is indicative that wholesale gasoline prices have been increasing faster than crude oil prices.

* Note also that refining margins are calculated using Edmonton Par as the crude oil price. As noted on page 2, some refineries purchase costs are more closely linked to Brent crude prices. We will be addressing this factor in future issues of the Fuel Focus.

According to the U.S. EIA This Week in Petroleum report released August 31, 2011, widespread refinery outages in the United States, both planned and unplanned, caused U.S. gasoline prices to rise even faster than crude prices, amplifying the typical seasonal increase in refiner gasoline margins across the U.S. Since the Canadian market is heavily influenced by U.S. wholesale gasoline markets, this tends to push up prices across the Canadian market.

Overall, marketing margins hovered at around 6 cents per litre - a 1 cent per litre decline compared to last year at the same time. For the five centres, marketing margins ranged from a low of 3 cents per litre in Montreal to a high of 7 cents per litre in Toronto.

Figure 5: Gasoline Refining and Marketing Margins
Four-Week Rolling Average Ending September 6, 2011
------- Refining Margin




- Marketing Margin




Source: NRCan

## Crude Oil Overview

## World Crude Oil Prices Firm Up

For the week ending September 2, 2011, prices for the three marker crudes averaged between $\$ 542 / \mathrm{m}^{3}$ and $\$ 699 / \mathrm{m}^{3}$, (US\$88 to US\$114 per barrel). This is an increase of $\$ 14$ to $39 / \mathrm{m}^{3}$ (US\$3 to US\$7 per barrel) compared to the previous week.

Although the potential of a disrupting weather event caused market apprehensions, as seen with the latest hurricane moving up the U.S. and Canadian East Coast, it had almost no impact on energy prices. Petroleum facilities came back on line almost immediately as the storm damage remained minimal. Nonetheless, other
tropical storms in the U.S. Gulf of Mexico forced some crude oil production platform closures, pushing prices upward.

Large U.S crude oil and petroleum product inventories helped moderate the increase in prices. The lackluster U.S. and global economic performance continues to put downward pressure on prices. In addition, the Canadian and U.S. Labour Day weekend signaled the end of the high demand season for gasoline as refiners will now move towards winter mode specification of gasoline and the production of distillates for heating.

Figure 6: Crude Oil Price Comparisons


Changes in Crude Oil Prices

| Crude Oil Types | $\begin{array}{c}\text { Week Ending: } \\ \text { 2011-09-02 }\end{array}$ |  | Change From: |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{array}{c}\text { \$Can/ } \\ \mathrm{m}^{3}\end{array}$ |  | $\begin{array}{c}\text { \$US/ } \\ \mathrm{bbl}\end{array}$ | $\begin{array}{c}\text { \$Can/ } \\ \mathrm{m}^{3}\end{array}$ | $\begin{array}{c}\text { \$US/ } \\ \mathrm{bbl}\end{array}$ | $\begin{array}{c}\text { \$Can/ } \\ \mathrm{m}^{3}\end{array}$ |
| Edmonton Par | 591.81 | 96.16 | +38.93 | +7.09 | +105.54 | +22.70 |
| bbl |  |  |  |  |  |  |$]$

Source: NRCan

## Canadian Crude Oil Reserves

The bulk of Canada's crude oil reserves are contained in Alberta's oil sands. Oil sands are estimated to contain 170 billion barrels of crude oil reserves. Canada's conventional oil reserves (e.g. non oil sands) are spread across Canada's provinces and territories. Canada's conventional proven oil reserves are currently estimated at 4.3 billion barrels. Alberta holds around $35 \%$ of Canada's conventional oil reserves and the Western Canadian provinces of Alberta, British Columbia, Saskatchewan and Manitoba collectively account for about 61\% of Canada's conventional oil reserves.

The East Coast offshore areas represent about 31\% of conventional oil reserves. Canada's remaining proven conventional oil reserves are located in Ontario, the Mackenzie/Beaufort Area and the Mainland Territories.

| Canadian Conventional Crude Oil Reserves |  |  |
| :--- | :---: | :---: |
| Location | Million <br> barrels | Percent |
| British Columbia | 113 | $2.6 \%$ |
| Alberta | 1,495 | $34.6 \%$ |
| Saskatchewan | 959 | $22.2 \%$ |
| Manitoba | 53 | $1.2 \%$ |
| Ontario | 10 | $0.2 \%$ |
| Mainland Territories | 12 | $0.3 \%$ |
| Mackenzie Beaufort | 339 | $7.8 \%$ |
| East Coast Offshore | 1,344 | $31.1 \%$ |
| Total 4,325 $100.0 \%$ <br> Source: Natural <br> http://www.nrcan.gc.ca/ eneene/ sources/crubru/re   <br> Vrev/index-eng.php   <br> Resources Canada,   |  |  |

