## Fuel Focus

Understanding Gasoline Markets in Canada and Economic Drivers Influencing Prices

Issue 16, Volume 8
August 23, 2013

Copies of this publication may be obtained free of charge from: Natural Resources Canada
Petroleum Resources Branch
580 Booth Street, $17^{\text {th }}$ Floor
Ottawa, Ontario K1A 0E4
Phone: (613) 992-9612
TTY Service: (613) 996-4397 (Teletype for the hearing-impaired)
Fax (613) 992-0614
Email: prb.drp@nrcan-rncan.gc.ca
Web site: http://nrcan.gc.ca/eneene/focinf-eng.php
© Her Majesty the Queen in Right of Canada 2013
ISSN 1918-3321

Aussi offert en français sous le titre Info-Carburant

## National Overview

After a Four-Week Decline, Canadian Pump Prices Increased 2 Cents per Litre from Last Week

For the week ending August 20, 2013, the average Canadian retail gasoline price was $\$ 1.32$ per litre. This is an increase of 2 cents per litre from the previous week and an increase of 2 cents per litre from a year ago.
Diesel fuel prices remained unchanged at $\$ 1.25$ per litre from the previous week. This is a decrease of nearly 1 cent per litre compared to the same period last year. Furnace oil prices rose from the previous week by 1 cent to $\$ 1.19$ per litre, and are 2 cents per litre higher compared to the same period last year.

Average retail pump prices across Canada moved upward on higher wholesale gasoline prices and increased crude oil prices.

## Recent Developments

- U.S. Crude Oil Inventory Fall: According to the U.S. Energy Information Administration, oil stocks at the Cushing storage hub in the U.S. Midwest are at a 17-month low. Inventories at Cushing, the delivery point for U.S. benchmark crude oil futures, have been falling as reduced pipeline constraints have helped move larger supplies of crude to refineries that have been working at high capacity rates. (Source: Daily Oil Bulletin)
- IEA Oil Market Report for August: According to the International Energy Agency (IEA), global oil demand growth is expected to accelerate in 2014 to 1.1 million barrels per day ( $\mathrm{mb} / \mathrm{d}$ ), compared to 0.9 $\mathrm{mb} / \mathrm{d}$ in 2013. The forecast of demand growth for 2014 has been trimmed by $0.1 \mathrm{mb} / \mathrm{d}$ on reduced GDP expectations from the International Monetary Fund, while that for 2013 is largely unchanged. (Source: IEA. http:// www.iea.org/ newsroomandev ents/news/2013/ august/ name,42443,en.html )
- Where Will the Bulk of Oil Demand Growth Come From? In the next five years, almost half of global oil demand growth will come from China, and this trend is set to continue to 2035, as oil demand from the transportation sector is growing strongly in countries such as China and India. In contrast, oil demand among OECD countries is expected to decline over the next two decades, driven mostly by government policies on fuel efficiency and the fact that rates of vehicle ownership are already high. (Source: IEA FAQ's)

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: |  |
| :--- | :---: | :---: | :---: |
| $\Phi / \mathrm{L}$ | $2013-08-20$ | Previous <br> Week | Last Year |
| Gasoline | 132.0 | +2.0 | +1.7 |
| Diesel | 125.4 | 0.0 | -0.5 |
| Furnace Oil | 118.7 | +0.6 | +2.0 |

Source: NRCan
Natural Gas Prices for Vehicles

| 2013-08-20 | ¢/kilogram | ¢/L gasoline <br> equivalent | ¢/L diesel <br> equivalent |
| :--- | :---: | :---: | :---: |
| Vancouver | 119.4 | 78.8 | 81.7 |
| Edmonton | 115.1 | 75.9 | 78.7 |
| Toronto | 110.6 | 73.0 | 75.6 |

Source: $\$ / \mathrm{kg}$ Kent Marketing Services Limited
In this Issue

Page
National Overview ..... 1

Recent DevelopmentsRetail Gasoline Overview1
Wholesale Gasoline Prices2
Gasoline Refining and Marketing Margins ..... 4

## Retail Gasoline Overview

The average Canadian pump price in selected cities for the four-week average ending August 20, 2013, was $\$ 1.32$ per litre, a decrease of 2 cents per litre from the last report on August 9, 2013. This represents a 2 cent-per-litre increase compared to the same period in 2012.

The four-week average crude oil price decreased by less than 1 cent per litre to 68 cents per litre compared to two weeks ago. This represents a 9 cent-per-litre increase compared to the same time last year.

Retail gasoline prices in most western centresVancouver to Winnipeg-decreased by less than 2 cents per litre when compared to the previous report and ranged from $\$ 1.16$ to $\$ 1.46$ per litre. Prices in eastern cities-Toronto to St. J ohn's-declined by 1 cent per litre and ranged from $\$ 1.30$ to $\$ 1.40$ cents per litre.
At the national level, refining and marketing costs and margins decreased 1 cent per litre to 24 cents per litre. This represents a decrease of 8 cents per litre compared to the same time last year.

Figure 3: Regular Gasoline Pump Prices in Selected Cities Four-Week Average (J uly 30 to August 20, 2013)


Source: NRCan

* Regulated Markets


## The Cost Component of a Litre of Gasoline

According to the latest data in Figure 3 above, approximately 52\% of the cost of a litre of gasoline is due to the cost of crude oil. Refining and marketing costs and margins, plus taxes accounts for the remainder. The following explains the breakdown of these costs and will hopefully shed some light on the pricing mechanism of this commodity. Gasoline prices are a mix of different costs such as: the cost of crude oil, the refining margins, the marketing and retail costs and the provincial, municipal and federal taxes. The primary source for gasoline is crude oil bought by Canadian refiners on the world market. Canadian refiners have no discretion and must compete with refiners in other countries and pay the going price.

The next step in the transformation process is to refine the crude oil. Refineries require different processes and make different amounts of gasoline depending on the kind of crude oil originally fed into the system. The gasoline sold to consumers must meet more than a dozen different quality standards to ensure that it is safe to handle and will work properly in your car. To cover their costs and make a profit, refiners apply a margin defined as the difference between the cost of crude oil and the price at which the refiner can sell the gasoline. The margin covers the refining costs and a profit for the refiner. Once the gasoline is produced, it must be stored in tanks until it is sold and delivered to consumers. Retail and marketing costs average about 7 cents per litre and are added to the price of gasoline.

## Wholesale Gasoline Prices

Wholesale gasoline prices increased in all ten selected centres for the week ending August 15, 2013, compared to the previous week. Overall, prices ranged from less than 1 cent per litre to 4 cents per litre.

In the eastern markets of Canada and United States, wholesale gasoline prices, compared to the previous week, registered increases ranging from 2 to 4 cents per litre. Prices for the period ended in the 81 to 84 cent-per-litre range.

Western wholesale gasoline prices ended in the range of 77 to 89 cents per litre, with increases in the range of less than 1 cent to 3 cents per litre.

Kinder Morgan's Trans Mountain pipeline supplies over $90 \%$ of the gasoline used in the British Columbia Lower Mainland from Western Canada. This gasoline comes from Edmonton refineries. The limited capacity of the Trans Mountain pipeline means that the supply / demand balance in the Lower Mainland is tighter than that in Seattle. This has been cited by some observers as the reason for the wholesale gasoline price gap between Vancouver and Seattle.

Figure 4: Wholesale Gasoline Prices
Rack Terminal Prices for Selected Canadian and American Cities Ending August 15, 2013
(CAN $\$ / \mathrm{L}$ )


Sources: NRCan, Bloomberg Oil Buyers Guide

## Gasoline Refining and Marketing Margins

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

Gasoline refining margins exhibit similar patterns as the wholesale gasoline market, rising and falling closely with demand. The gradual decreases indicate that crude oil prices have been increasing faster than wholesale prices. The downward slope in refining margins corresponds to sufficient gasoline supplies and the relative stability in world crude oil markets.

Marketing margins are usually very stable across the selected centres. It is the difference between the pump price (excluding taxes) and the acquisition costs of the fuel by the retailer and represents the smallest component of the retail price of gasoline at the pump.

In general, both refining and marketing margins are influenced by specific market conditions, mainly due to changes in product supply and demand balances.

Figure 5: Gasoline Refining and Marketing Margins Four-Week Rolling Average Ending August 20, 2013
------- Refining Margin



- Marketing Margin




Source: NRCan

## Crude Oil Overview

## Major Crude Oil Price Benchmarks Trading Upward

For the week ending August 16, 2013, prices for the three marker crudes averaged between $\$ 662 / \mathrm{m}^{3}$ and $\$ 713 /$ m $^{3}$ (US\$102 to US\$110 per barrel). Edmonton Par ended at $\$ 662 / \mathrm{m}^{3}$ (US\$ 102 per barrel); higher than the previous week, increasing by $\$ 10 / \mathrm{m}^{3}$ (US\$2 per barrel).

Meanwhile, West Texas Intermediate (WTI) registered at $\$ 695 / \mathrm{m}^{3}$ (US\$107 per barrel), higher than the previous week by $\$ 9 / \mathrm{m}^{3}$ (US\$2 per barrel). The Brent crude oil benchmark rose to $\$ 713 / \mathrm{m}^{3}$ (US\$110 per barrel), up \$10/m $\mathrm{m}^{3}$ (US\$2 per barrel) from the previous week.

For the week ending August 16, 2013, the price differential between WTI and Brent prices stood at \$19/m³ (US\$3 per barrel).

Brent crude oil prices continued to climb for the week of August 12, 2013, due to the unrest in Egypt leading to the fear of supply disruptions through the Suez Canal. Egypt is not a major producer of crude, however the Suez Canal and Egyptian ports are hubs for transporting crude. Currently, it is unlikely that there will be any disruptions, however markets move on the premise of what is likely to happen.

Figure 6: Crude Oil Price Comparisons


Changes in Crude Oil Prices

| Crude Oil Types | Week Ending: <br> 2013-08-16 |  | Change From: |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Previous Week <br> $\mathrm{m}^{3}$ |  | \$US/ <br> bbl | \$Can/ <br> $\mathrm{m}^{3}$ | \$US/ <br> bbl | \$Can/ <br> $\mathrm{m}^{3}$ |
| Edast Year | \$US/ <br> bbl |  |  |  |  |  |
| WTI | 662.31 | 101.93 | +10.03 | +1.89 | +111.40 | +13.47 |
| Brent | 694.69 | 106.92 | +9.34 | +1.80 | +106.69 | +12.50 |
|  | 713.48 | 109.81 | +10.44 | +1.98 | -4.05 | -5.41 |

Source: NRCan

## Short Term energy Outlook

According to the U.S. Energy Information Administration's (EIA) Short-Term Energy Outlook released August 6, 2013, crude oil prices increased during the first three weeks of July 2013 as world oil markets tightened in the face of seasonal increases in world consumption, unexpected supply disruptions, and heightened uncertainty over the security of supply with the renewed unrest in Egypt. The EIA expects that the Brent crude oil spot price, which averaged $\$ 108$ per barrel over the first half of 2013, will average $\$ 104$ per barrel over the second half of 2013 , and $\$ 100$ per barrel in 2014.
EIA expects the WTI discount to widen to $\$ 6$ per barrel by the end of 2013 as crude oil production in Alberta, Canada, recovers following the heavy June flooding and as midcontinent production continues to grow.
Rising crude oil prices and seasonal demand increases contributed to U.S. regular gasoline retail prices increasing from an average of $\$ 3.50$ per gallon on J uly 1, 2013, to $\$ 3.63$ per gallon on August 5. EIA expects the regular gasoline retail price to average $\$ 3.59$ per gallon in the third quarter of 2013, and the annual average price to decline from an average of $\$ 3.63$ per gallon in 2012 to $\$ 3.52$ per gallon in 2013 and to $\$ 3.37$ per gallon in 2014.
Source: U.S. EIA, http:// www.eia.gov/forec asts/steo/index.cfm?src=Petroleum-b1

