Natural Resources Canada
Ressources naturelles Canada

Fuel Focus

Understanding Gasoline Markets in Canada and Economic Drivers Influencing Prices

Issue 4, Volume 8

March 8, 2013

Canada

Copies of this publication may be obtained free of charge from:
Natural Resources Canada
Petroleum Resources Branch
580 Booth Street, 17th 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*

Fuel Focus

Volume 8, Issue 4
March 8, 2013

National Overview

Canadian Retail Gasoline Prices Unchanged from Last Week at $1.31 per Litre

Canadian average retail gasoline prices remained unchanged from the previous week at $1.31 per litre for the week ending March 5, 2013—a five-month high. This represents an increase of 2 cents per litre from the last report two weeks ago. Prices are nearly 4 cents per litre higher than last year at this time.

Diesel fuel prices declined by 2 cents to $1.33 per litre, up 2 cents from the same period last year. Furnace oil prices decreased by less than 1 cent, ending at $1.25 per litre, an increase of 3 cents from a year ago.

Average retail pump prices across Canada remained unchanged from the previous week, despite lower wholesale gasoline prices and the underlying downward pressure in world crude oil prices.

Recent Developments

- **Domestic Sales of Refined Products:** Motor gasoline sales increased 1.9 billion litres (5%) to 42 billion litres from January to November 2012 compared to the same period in 2011. Diesel fuel sales rose by 0.2 billion litres (1%) to 28 billion litres, while light fuel oil (furnace oil) decreased by 0.4 billion litres (14%) to 3 billion litres in the same time period. (Source: NRCan and Statistics Canada)
- **Prince Edward Island Gasoline and Diesel Tax Rates**: The Prince Edward Island gasoline tax on gasoline and diesel oil for March 1, 2013, remains unchanged from the previous month at 15.8 and 20.2 cents per litre. (Source: Prince Edward Island Government, www.taxandland.pe.ca)
- **Upgrader Maintenance Pushes Prices Up**: Canadian synthetic crude oil prices rose on March 1, 2013, on expectation of a heavy spring maintenance schedule for oil sands upgraders. Spring maintenance work is expected to begin at Suncor Energy Inc.'s hydrogen plant by month's end. The planned 14-week shutdown will lower production from Upgrader 1, one of two plants that convert mined bitumen into synthetic crude at Suncor's extensive Fort McMurray project site. The company also expects to start a full shutdown of Upgrader 1 in the second quarter. Lasting an expected seven weeks, the maintenance will mean a complete loss of the facility's 100,000 bbls per day of synthetic output. (Source: Daily Oil Bulletin)

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

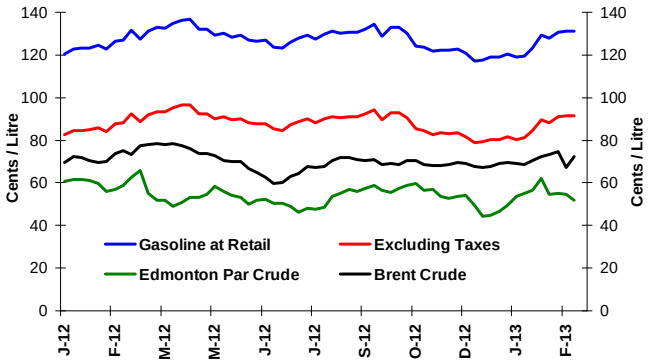
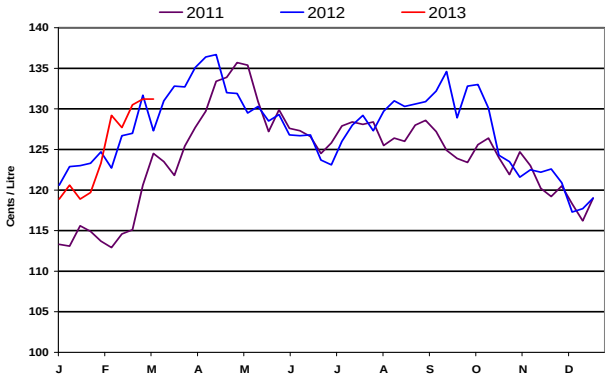


Figure 2: Weekly Regular Gasoline Prices



Changes in Fuel Prices

	Week of:	Change from:	
¢/L	2013-03-05	Previous Week	Last Year
Gasoline	131.2	0.0	+3.9
Diesel	133.2	-1.9	+2.4
Furnace Oil	125.4	-0.8	+3.4

Source: NRCan

In this Issue

Retail Gasoline Overview

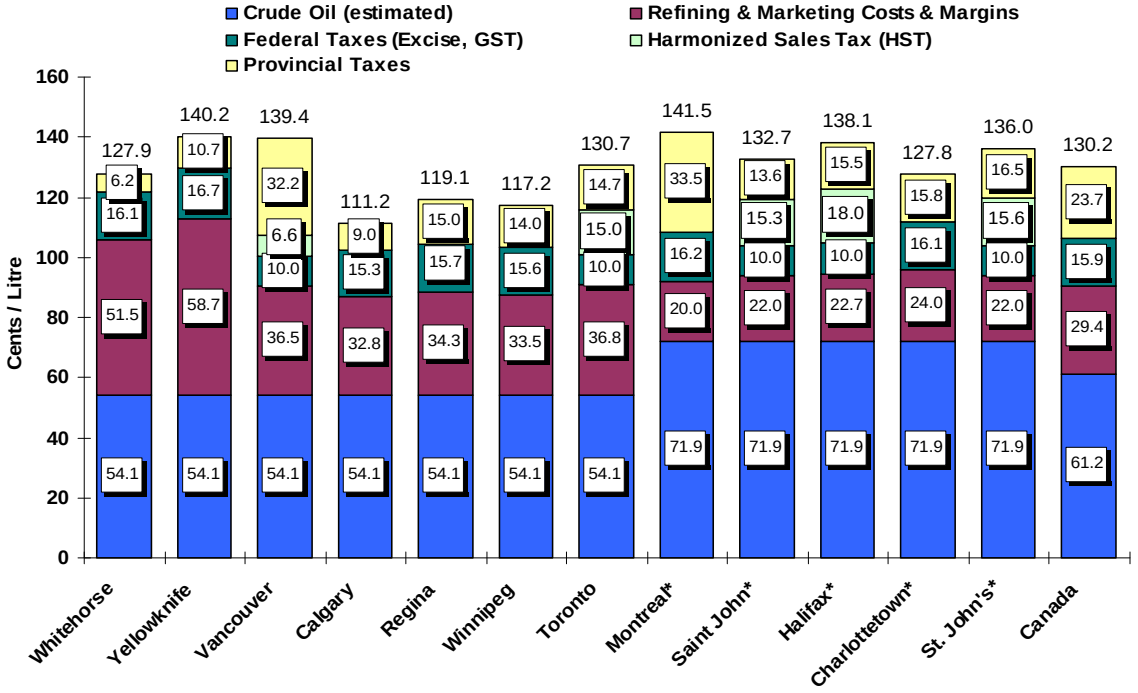
For the period ending March 5, 2013, the **four-week average** regular gasoline pump price in selected cities across Canada was $1.30 per litre, an increase of 2.5 cents per litre compared to the previous report of February 22, 2013. Compared to the same period in 2012, the average Canadian pump price is 2 cents per litre higher.

The **four-week average** crude component decreased by 2 cents per litre to 61 cents per litre compared to two weeks ago.

Retail gasoline prices in most Western centres increased by 5 cents per litre compared to the previous report and ranged from $1.11 per litre to $1.39 per litre. Prices in Eastern cities increased by nearly 3 cents per litre and ranged from $1.28 per litre to $1.42 per litre.

At the national level, refining and marketing costs and margins registered an increase of 4 cents per litre to 29 cents per litre compared to the last report two weeks ago.

Figure 3: Regular Gasoline Pump Prices in Selected Cities
Four-Week Average (February 12 to March 5, 2013)



Source: NRCan

** Regulated Markets*

Why Have Gasoline Prices Risen Since the Start of the Year?

Since the beginning of the year, American consumers, much like Canadians, have seen an increase in gasoline prices. According to the U.S. Energy Information Administration (EIA) release *Today in Energy*, the average U.S. retail price for regular motor gasoline is up about 45 cents per gallon (12 cents per litre) since the start of 2013, reaching $3.75 per gallon on February 18. The rise in gasoline prices is partly due to higher crude oil prices. However, most of the increase in the pump price of gasoline reflects an increase in the gasoline crack spread, the difference between the wholesale price of gasoline and the price of crude oil. Between January 1 and February 19, the price of Brent crude oil—the waterborne light sweet crude grade that drives the wholesale price of gasoline sold in most U.S. regions—rose about $6 per barrel, or about 15 cents per gallon.

Some of the factors contributing to rising crack spreads (or margins) for gasoline, and therefore to rising retail gasoline prices, include: refinery outages; global demand for petroleum products increasing year-over-year; and prior low crack spreads. Throughout much of November and December 2012, gasoline crack spreads were very low, and in some cases negative (a barrel of gasoline was worth less than a barrel of Brent crude oil).

Source: NRCan and U.S. Energy Information Administration, http://www.eia.gov/todayinenergy/detail.cfm?id=10111

Wholesale Gasoline Prices

For the **week ending February 28, 2013**, wholesale gasoline prices decreased in most Canadian and American centres compared to the previous week—an indication that crude oil prices are being reflected in wholesale prices.

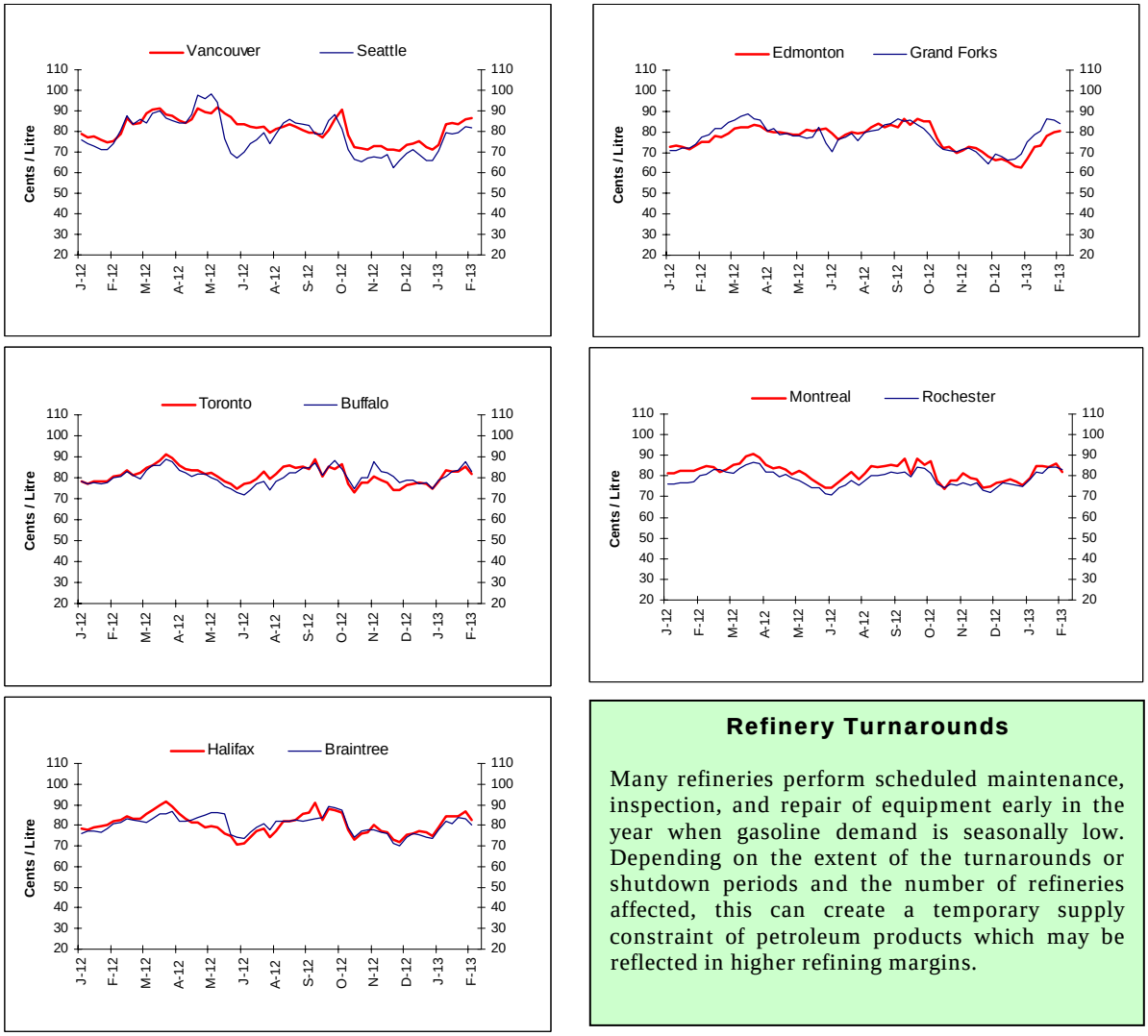
Wholesale gasoline price changes ranged from a decrease of 4 cents per litre to an increase of less than 1 cent per litre, ending in the 80 to 86 cent-per-litre range.

In the Eastern markets of Canada and the U.S., wholesale gasoline prices, compared to the previous week, registered decreases ranging from 1 to 4 cents per litre. Prices for the period ended in the 80 to 83 cent-per-litre range.

Wholesale gasoline prices in Western centres ranged from a decrease of 2 cents per litre to an increase of less than 1 cent per litre and ended in the 80 to 86 cent-per–litre range.

In the **last four weeks**, wholesale prices in most selected Canadian and American centres ranged from an increase of 8 cents per litre to a decease of 3 cents per litre.

Figure 4: Wholesale Gasoline Prices
Rack Terminal Prices for Selected Canadian and American Cities Ending February 28, 2013
(Can ¢/L)



Sources: NRCan, Bloomberg Oil Buyers Guide

Refinery Turnarounds

Many refineries perform scheduled maintenance, inspection, and repair of equipment early in the year when gasoline demand is seasonally low. Depending on the extent of the turnarounds or shutdown periods and the number of refineries affected, this can create a temporary supply constraint of petroleum products which may be reflected in higher refining margins.

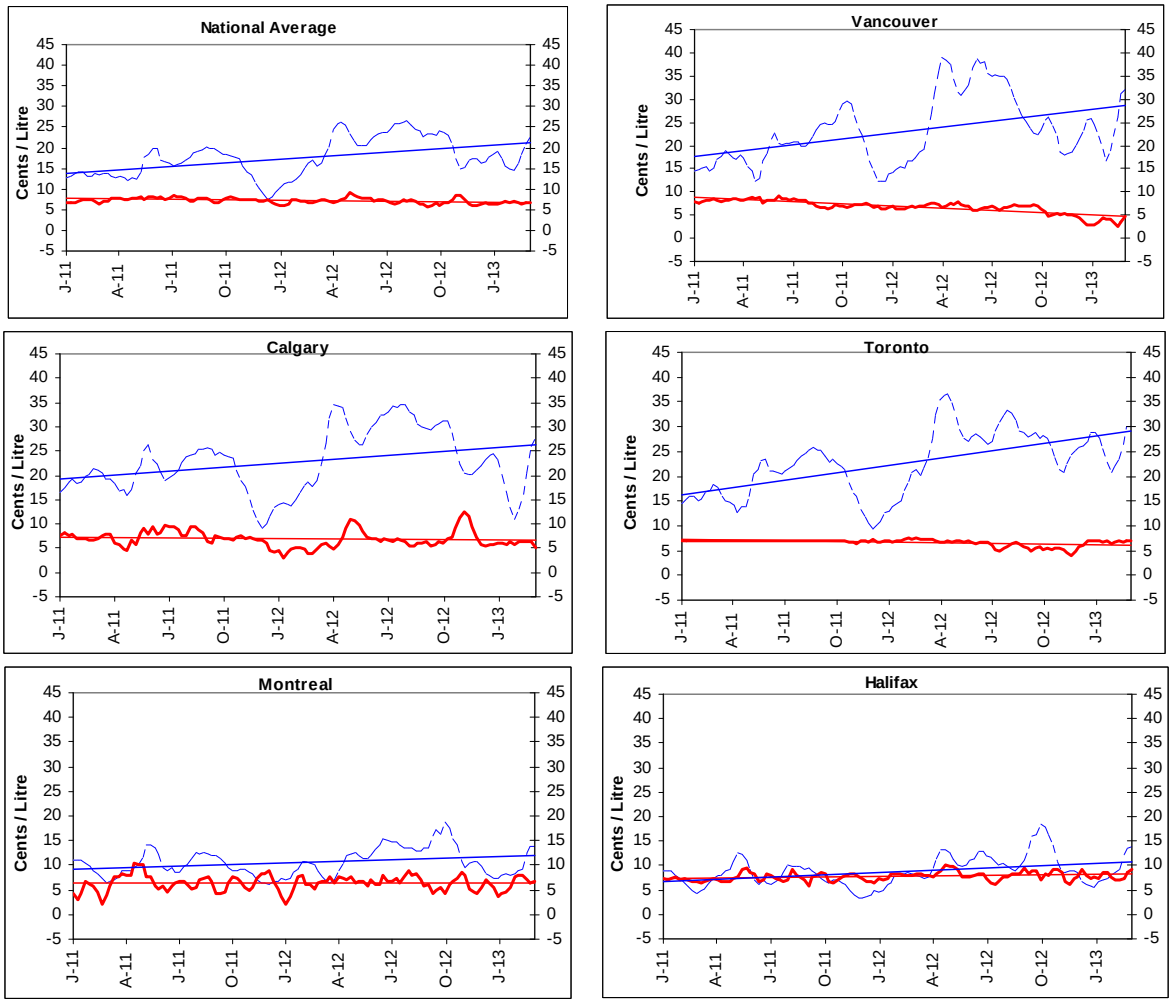
Gasoline Refining and Marketing Margins

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

The refining margins' downward movement in the last eight months indicates an increase in gasoline supplies. However, refining margins have been showing some gains in the last few weeks, which is indicative of a tightening in supplies.

As we near the spring season, demand for gasoline is expected to increase. As a result, refiners will be attempting to balance both the demand for heating oil while converting their operations to produce more gasoline in readiness for the driving season. This situation can create a temporary tightening of supply and an upward pressure on refining margins. Ultimately, the higher margins are reflected in the pump price.

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



Source: NRCan

Crude Oil Overview

World Crude Oil Prices Decline

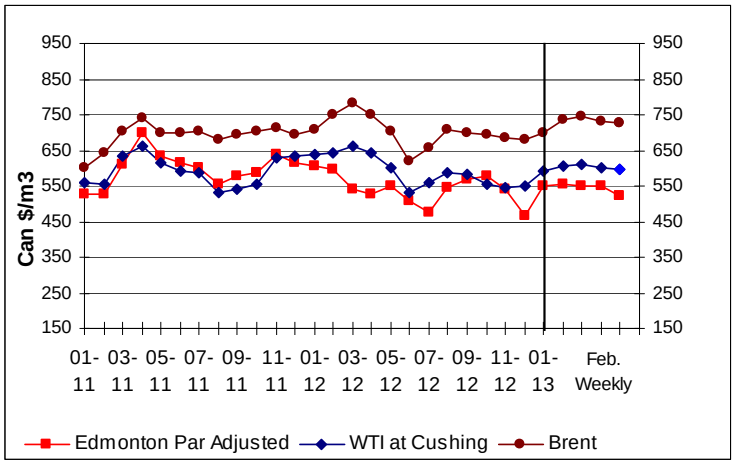
For the week ending March 1, 2013, prices for the three marker crudes averaged between $521/m^3$ and $725/m^3$, (US$81 to US$112 per barrel). This is a decrease for all three benchmarks of $5/m^3$ to $26/m^3$ (US$2 to US$5 per barrel) from the previous week.

Overall, global crude oil prices fluctuated downward for the period ending March 1, 2013. Brent crude oil, the international waterborne benchmark, which had traded upward since November partly buoyed by growing international oil demand expectations and risk premiums, has weakened due to reduced economic performance from the two largest oil consuming countries, namely the U.S. and China.

The gap between the North American benchmark, West Texas Intermediate (WTI) and Brent has diminished, but WTI continues to trade at a discount of $128/m^3$ (US$20 per barrel) to Brent, mainly due to its landlocked situation. Meanwhile, wholesale gasoline prices in the U.S. and Canada are mainly driven by the price of Brent crude oil. Fuel Focus previously discussed issues regarding the impact of the wholesale gasoline market on retail gasoline prices in Issue 12 of June 29, 2012, and how global and North American crude oil prices affect Canadian gasoline markets in Issue 4 of March 9, 2012.

U.S. crude oil inventories are currently hovering above their historical five-year average, which helps moderate the upward push on WTI prices.

Figure 6: Crude Oil Price Comparisons



Changes in Crude Oil Prices

Crude Oil Types	Week Ending: 2013-03-01		Change From:			
			Previous Week		Last Year	
	$Can/ m^3	$US/ bbl	$Can/ m^3	$US/ bbl	$Can/ m^3	$US/ bbl
Edmonton Par	521.51	80.71	-26.40	-5.46	-128.93	-23.67
WTI	596.61	92.33	-5.19	-2.21	-73.65	-15.21
Brent	724.70	112.15	-8.46	-3.03	-50.42	-12.22

Source: NRCan

Crude Oil Types Used in Canadian Refineries

Most refineries in Western Canada and Ontario were designed to process the light sweet crude oil that is produced in Western Canada. Unlike leading refineries in the U.S., Canadian refineries in these regions have been slower to reconfigure their operations to process lower cost, less desirable crude oils, choosing instead to rely extensively on the abundant, domestically produced, light, sweet crude. As long as these lighter crude oils were available, refining economics were insufficient to warrant new investment in heavy oil conversion capacity.

In Western Canada and Ontario, more than 60% of the crude oil processed by refiners is either conventional light, sweet crude oil or high quality synthetic crude oil. Synthetic crude is a light crude oil that is derived by upgrading oil sands. Most of the remaining crude oil processed by these refineries is heavy, sour crude.

Refineries in Atlantic Canada and Quebec use imported crude oil and tend to process a more diverse crude slate than their counterparts in Western Canada and Ontario. These refiners have the capacity to purchase crude oil produced almost anywhere in the world and therefore have incredible flexibility in their crude buying decisions. The crude slate in Eastern Canada is expected to remain much more static than that in Western Canada and Ontario, as these refiners are not constrained by the quality or volume of domestic crude production.

Source: Natural Resources Canada, http://www.nrcan.gc.ca/energy/sources/petroleum-products-market/1358#5