

Fuel Focus

Understanding Gasoline Markets in Canada and Economic Drivers Influencing Prices

Volume 5, Issue 9

May 21, 2010



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) 995-1913

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 2010

ISSN 1918-3321

Aussi offert en français sous le titre Info-Carburant

National Overview

Retail Gasoline Prices Decreased Nearly 2 Cents per Litre from Last Week

Reflecting lower world crude oil and North American wholesale gasoline prices, the average Canadian gasoline price for the week ending May 18, 2010, declined by almost 2 cents per litre to \$1.01 per litre and reached a two-month low. Contrary to previous years' patterns to date, gasoline prices have been moderately fluctuating in the range of less than 7 cents per litre since the beginning of the year.

Diesel fuel prices declined by 2 cents per litre to \$1 per litre the week of May 18, 2010. However, this represents an increase of 17 cents per litre compared to the same period last year. Furnace oil prices declined by less than 1 cent per litre from the previous week to an average of 90 cents per litre.

Recent Developments

- Bio Heating and Transportation Fuels Study: A recent study on biodiesel product quality and reliability was conducted in collaboration with the Government of Canada's National Renewable Diesel Demonstration Initiative and a number of energy and transportation organizations. The study helped develop certain guidelines to ensure biodiesel products meet consumers' needs. (Source: Canadian Petroleum Products Institute, http://cppi.ca/index_e.php?p=30)
- Gasoline Sales Increase: Motor gasoline sales increased nearly 4% to 10 billion litres in the first quarter of 2010 compared to the same period in 2009. Diesel fuel oil sales rose 2% to 6.6 billion litres, while light fuel oil (furnace oil) declined 15% to 1.2 billion litres in the same time period. (Source: Statistics Canada, http://www.statcan.gc.ca/daily-quotidien/100507/dq100507c-eng.htm)
- E20 Reduces Emissions in Automobiles: According to a study by the Centre for Integrated Manufacturing Studies at the Rochester Institute of Technology, the use of E20 (20% ethanol in gasoline) fuel reduces the tail pipe emissions of hydrocarbons and carbon monoxide, compared with traditional gasoline or E10 blends. The research team found no measurable impact to vehicle drivability or maintenance in conventional internal combustion engines. (Source: Hart Global Refining and Fuels Report, April 2010)

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

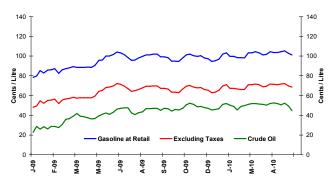


Figure 2: Weekly Regular Gasoline Prices



Changes in Fuel Prices

	Week of:	Change from:		
¢/L	2010-05-18	Previous Week	Last Year	
Gasoline	101.3	-1.5	+4.4	
Diesel	99.7	-1.6	+17.4	
Furnace Oil	90.3	-0.3	+15.9	

Source: NRCan

In this Issue	page
National Overview	1
Recent Developments	1
Retail Gasoline Overview	2
Wholesale Prices	3
Refining and Marketing Margins	4
Crude Oil Overview	5







Retail Gasoline Overview

The average Canadian pump price in selected cities for the four-week average ending May 18, 2010, was \$1.04 per litre, a decrease of 1 cent per litre from the last report on May 7, 2010. This represents a 10 cents per litre increase compared to the same period in 2009.

The **four-week average** crude oil price decreased by 3 cents per litre to 49 cents per litre compared to two weeks ago. The crude oil cost component represents nearly 48% of the total pump price.

Retail gasoline prices in most Western centres-Vancouver to Winnipeg-increased about 1 cent per litre when compared to the previous report and ranged from 95 cents per litre to \$1.16 per litre. Prices in Eastern cities—Toronto to St. John's—dropped by 1 cent per litre and ranged from \$1 to \$1.13 cents per

At the national level, refining and marketing costs and margins registered an increase of nearly 2 cents per litre to 21 cents per litre. However, this represents a decline of 2 cents per litre compared to the same time last year.

160 ■ Crude Oil (estimated) ■ Refining & Marketing Costs & Margins ■ Federal Taxes (Excise, GST) □ Harmonized Sales Tax (HST) 140 ■ Provincial Taxes 118.6 115 6 112.9 120 112.7 10.7 106.7 107 2 106.2 104.2 103.5 102 1 100.2 98.9 16.5 26.8 Cents / Litre 1 95.2 15.6 15.0 15.5 10.7 15.8 18.0 26.3 13.0 10.0 10.0 10.0 43.0 42.0 24.0 60 21.4 16.8 40 49.3 49.3 49.3 49.3 49.3 49.3 49.3 49.3 49.3 49.3 49.3 49.3 49.3 20 0 Charlottetown Toronto Calgary Canada

Figure 3: Regular Gasoline Pump Prices in Selected Cities Four-Week Average (April 27 to May 18, 2010)

Refining Crude Oil to Make Gasoline - Refinery Economics

As the summer driving season nears, with the expected increase in demand for gasoline, it may be appropriate to review some considerations from the refiners' point of view in producing gasoline. The overall economics or viability of a refinery depends on the interaction of three key elements: the choice of crude oil used (crude slates), the complexity of the refining equipment (refinery configuration), and the desired type and quality of products produced (product slate). Refinery utilization rates and environmental considerations also influence refinery economics.

Using more expensive crude oil (lighter, sweeter) requires less refinery upgrading, but supplies of light, sweet crude oil are decreasing and the differential between heavier and source crudes is increasing. Using cheaper heavier crude oil means more investment in upgrading processes. Costs and payback periods for refinery processing units must be weighed against anticipated crude oil costs and the projected differential between light and heavy crude oil prices.

Crude slates and refinery configurations must take into account the type of products that will ultimately be needed in the marketplace. The quality specifications of the final products are also increasingly important as environmental requirements become more stringent.

Source: Natural Resources Canada, http://www.nrcan.gc.ca/eneene/sources/petpet/refraf-eng.php



Source: NRCan



* Regulated Markets



Wholesale Gasoline Prices

Wholesale gasoline prices decreased in most selected centres for the **week ending May 13, 2010**, compared to the previous week. Overall, price changes ranged from a decline of less than 1 cent per litre to an increase of less than 3 cents per litre.

Wholesale gasoline prices in Eastern markets in both Canada and the United States have registered decreases ranging from 1 cent per litre to an increase of almost 3 cents per litre, compared to the previous week, ending the period in the 58-to 64-cent-per-litre range.

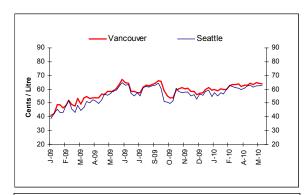
In comparison, Western wholesale gasoline price changes ranged from a drop of less than 1 to an increase of less than 1 cent per litre and ended in the range of 60 to 64 cents per litre.

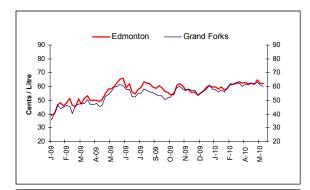
Overall, compared to the same period last year, prices in most selected centres are above last year's level with increases ranging from 3 cents per litre in Portland to 7 cents per litre in Seattle.

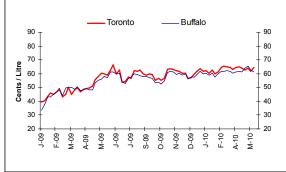
Figure 4: Wholesale Gasoline Prices

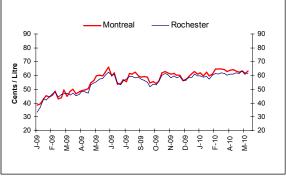
Rack Terminal Prices for Selected Canadian and American Cities Ending May 13, 2010

(Can ¢/L)











Tighten the cap

Car Care Canada estimates that each year in Canada, 22 million litres of gasoline vaporize into the atmosphere as a result of improperly tightened or missing gas caps.

It is also a common cause for failing an emissions test, yet it is simple and inexpensive to fix.

Source: Car Care Canada, http://www.carcarecanada.c $\underline{a}/$

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 for gasoline fluctuated upward in the last two weeks. This is indicative of a tightening in supplies relative to an expected increase in demand. Heading into the driving season, refiners are now producing more gasoline to meet the demand and to increase their inventories.

Gasoline demand peaks during the U.S. driving season. This season, which is traditionally from the Memorial Day weekend, Friday, May 28 to Monday

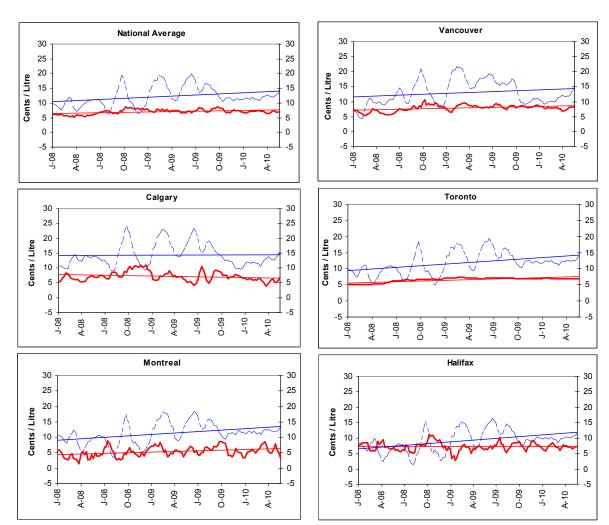
May 31, 2010, until the Labor Day holiday in September, also has an impact on Canadian gasoline prices.

Nationally, the marketing margins continue to hover around 7 cents per litre. As shown for Calgary, Montreal, and Halifax, this margin can be fairly volatile as outlets compete for market share.

Although it represents a small portion of the total pump price, the marketing margin can vary significantly from city to city and region to region depending on the local market conditions in each area.

Figure 5: Gasoline Refining and Marketing Margins

Four-Week Rolling Average Ending May 18, 2010
----- Refining Margin ——— Marketing Margin











Crude Oil Overview

World Crude Oil Prices Decline in the Last Two Weeks

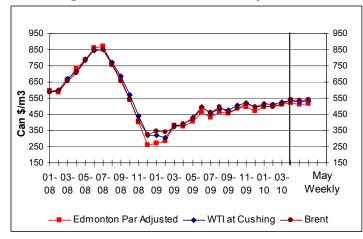
For the week ending May 14, 2010, prices for the three marker crudes averaged between $451/m^3$ and $511/m^3$, (US\$70 to US\$79 per barrel). This is a decrease of \$22 to $53/m^3$ (US\$3 to US\$8 per barrel) compared to the previous week.

Because U.S. crude oil inventories remain relatively high, crude oil prices were dampened. In the past week, the WTI traded at a discount partially due to a surplus inventory at Cushing, Oklahoma—a major North American trading centre for this type of crude.

Overall, on an average monthly basis, world crude oil prices have risen steadily to their highest level since November 2009. The increase observed since the beginning of 2010 is mainly due to the rise in global demand for petroleum products as world economies see partial recovery.

Meanwhile, further helping to firm-up prices, and reflecting China's increasing dependence on foreign oil, many reports indicate that this country's demand for oil remains robust with oil imports reaching record highs.

Figure 6: Crude Oil Price Comparisons



Changes in Crude Oil Prices

Crude Oil Types	Week Ending: 2010-05-14		Change From:			
			Previous Week		Last Year	
	\$Can/ m³	\$US/ bbl	\$Can/ m³	\$US/ bbl	\$Can/ m³	\$US/ bbl
Edmonton Par	451.05	70.12	-53.00	-7.77	+41.04	+14.34
WTI	482.19	74.97	-37.11	-5.26	+52.28	+16.48
Brent	511.44	79.51	-22.38	-2.95	+90.05	+22.19

Source: NRCan

Short-Term Energy Outlook

The U.S. Information Energy Administration's (EIA) assessment of global economic growth, global oil demand, and world oil prices are all slightly higher than in last month's Outlook. Expectation of a somewhat more robust global economic recovery supports the updated price forecast, particularly if the Organization of the Petroleum Exporting Countries (OPEC) continues to remain satisfied with its supply targets as global oil consumption continues to grow. The most important downside risk to this forecast is lower-than-expected economic growth.

The more optimistic economic growth forecasts led to an increase of about \$2 per barrel in EIA's projections for West Texas Intermediate (WTI) crude oil spot prices compared with the prior Outlook. EIA expects WTI prices to average about \$84 per barrel during the second half of this year, rising to \$87 by the end of next year.

Commercial oil inventories held in the Organization for Economic Cooperation and Development (OECD) countries stood at 2.70 billion barrels at the end of the first quarter of 2010. This is equivalent to about 58 days of forward cover, and is roughly 95 million barrels more than the 5-year average for the corresponding time of year. Although OECD oil inventories are still projected to remain at the upper end of the historical range over the forecast period, they are falling as a result of a combination of higher oil consumption and OPEC production restraint.

Source: EIA, Short-Term Energy Outlook, http://www.eia.doe.gov/emeu/steo/pub/contents.html; all figures are in U.S. dollars.

