Natural Resources Canada
Ressources naturelles Canada

Fuel Focus

Understanding Gasoline Markets in Canada and Economic Drivers Influencing Prices

Volume 6, Issue 5

March 25, 2011

Canada

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ISSN 1918-3321

Aussi offert en français sous le titre *Info-Carburant*

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National Overview

Canadian Retail Pump Prices Decline 2 Cents per Litre from Last Week

For the week ending March 22, 2011, average Canadian retail gasoline prices decreased from the previous week by 2 cents per litre to $1.22 per litre. Retail gasoline prices moved downward for the second week in a row, reflecting lower wholesale gasoline and crude oil prices. However, prices are now 19 cents per litre higher than last year during the same period. Average Canadian retail pump prices have been hovering at their highest level since October 2008.

Diesel fuel prices increased by nearly 1 cent per litre to $1.27 per litre from the previous week. Prices are 29 cents per litre higher compared to the same period last year. Furnace oil prices are up by 3 cents per litre compared to last week, and are 32 cents per litre higher than this time last year.

Due to a stronger Canadian dollar, Canadian consumers are to a certain degree, insulated from higher world crude oil prices. While the monthly average crude oil price in U.S. dollars has increased by 21% from January 2010 to February 2011, the price for the same crude oil in Canadian dollars has increased only 14%. Thus, Canadian consumers benefit from stronger Canadian dollars via somewhat less expensive refined petroleum products.

Recent Developments

- **Domestic Gasoline Sales Up 5% in January 2011:** Preliminary data on motor gasoline sales indicate an increase of 5% to 3.6 billion litres in 2011 compared to the same period in 2010. Diesel fuel sales rose 8% to 2.3 billion litres, while light fuel oil (furnace oil) increased 7% to 0.5 billion litres in the same time period. (Source: NRCan and Statistics Canada)
- **U.S. Oil Inventories and the Brent-WTI Price Spread Correlation**: According to the International Energy Agency (EIA) *Oil Market Report* released March 15, 2011, oil inventories at Cushing, Oklahoma, broke another record ending at 40.2 million barrels the week of March 4, 2011. Persistently high crude oil stocks in the U.S. Midwest, and Cushing in particular, appear to be related to WTI prices being lower than Brent prices. WTI prices have been trading at a discount to Brent since mid-August 2010, at the same time that Cushing inventory levels have increased. This also impacts the Canadian crude Edmonton Par price, since Edmonton Par prices are strongly linked to WTI. (Source: IEA, http://www.oilmarketreport.org/)

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

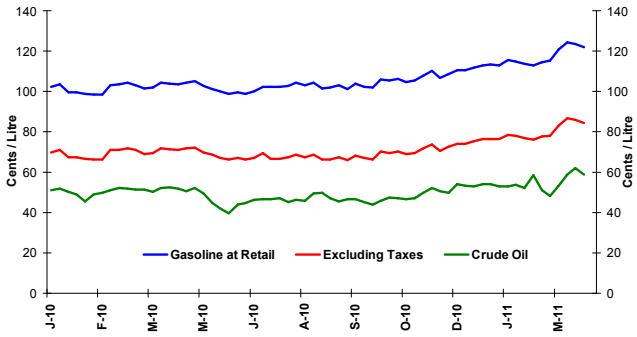
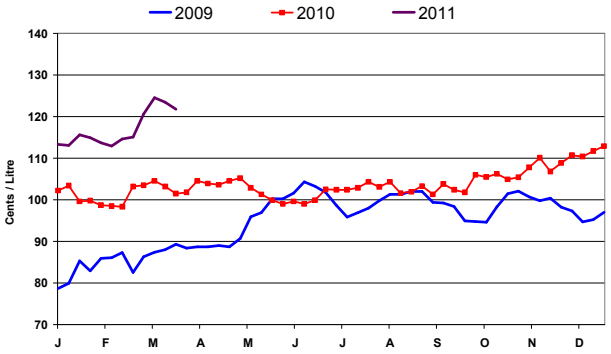


Figure 2: Weekly Regular Gasoline Prices



Changes in Fuel Prices

	Week of:	Change from:	
¢/L	2011-03-22	Previous Week	Last Year
Gasoline	121.8	-1.7	+18.6
Diesel	127.1	+0.7	+29.4
Furnace Oil	121.7	+2.9	+32.1

Source: NRCan

In this Issue

Retail Gasoline Overview

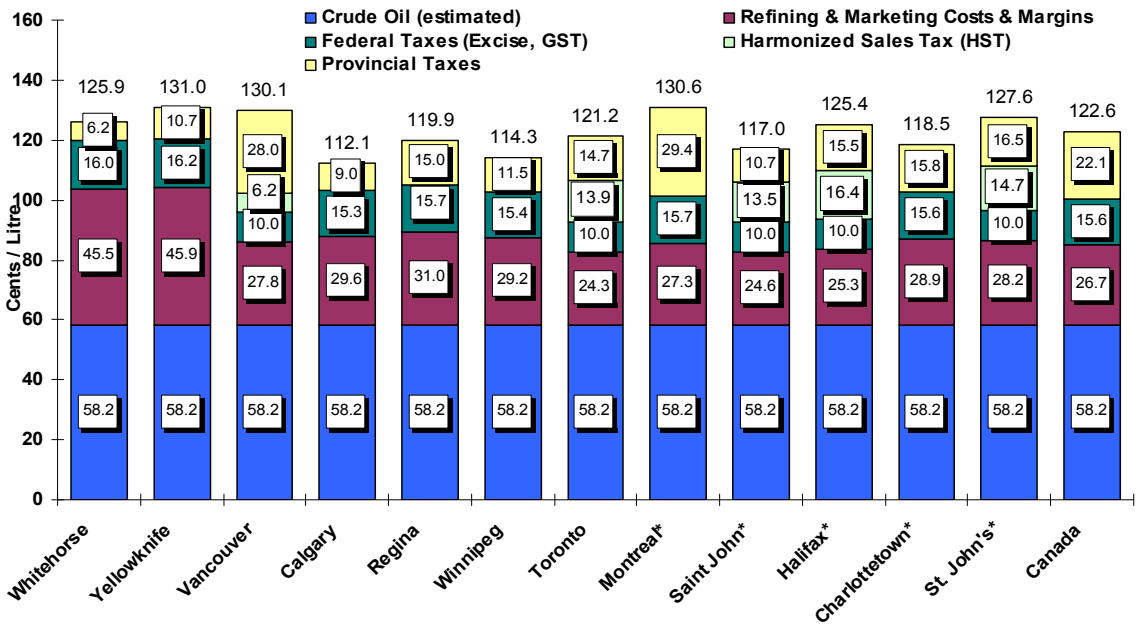
The **four-week average** regular gasoline pump price in selected cities across Canada was $1.23 per litre for the period ending **March 22, 2011**. This is 19 cents per litre higher than prices recorded at the same time last year.

The **four-week average** crude oil price component (based on Edmonton Par crude) of gasoline registered at 58 cents per litre, up by almost 6 cents per litre from two weeks ago. Compared to the same period in 2010, the crude oil price component of gasoline is 7 cents per litre higher.

Ranging from $1.12 per litre to $1.30 per litre, retail gasoline prices in most Western centres increased, on average, by 8 cents per litre compared to two weeks ago. Prices in Eastern centres increased on average also by 8 cents per litre, and ranged from $1.17 per litre to $1.28 per litre.

At the national level, refining and marketing costs and margins decreased by 2 cents per litre from two weeks ago, and are 7 cents per litre higher than last year at this time.

Figure 3: Regular Gasoline Pump Prices in Selected Cities
Four-Week Average (March 1 to 22, 2011)



Source: NRCan

** Regulated Markets*

Refining and Marketing Costs and Margins Explained

The refining margin, shown in Figures 3 and 5, is defined as the difference between the cost of crude oil purchased by refiners and the wholesale price of gasoline. This number is different than in Figure 5 because it uses the four-week rolling average. The characteristics of the gasoline produced depend on the type of crude oil that is used and the type of processing technology available at the refinery where it is produced. Using more expensive crude oil requires less refinery upgrading but supplies of light, sweet crude oil are decreasing and the differential between light sweet crude and the heavier sour crude is increasing. Using cheaper heavier crude oil means more investment in upgrading processes.

Distribution, marketing, and retail dealer costs and profits and taxes make up the remainder of the retail price of gasoline. Most gasoline is shipped from the refinery first by pipeline to terminals near consuming areas where it may be blended with other products (such as ethanol) to meet market specifications, and is then delivered by tanker truck to individual gasoline stations. The price at the pump includes the retailer's cost to purchase the finished gasoline and the costs of operating the service station. It also reflects local market conditions and factors, such as the desirability of the location and the marketing strategy of the owner.

The cost of doing business by individual dealers can vary greatly depending on where the dealer is located. These costs include wages and salaries, benefits, equipment, lease/rent, insurance, overhead, and federal and provincial taxes. Even retail stations next to each other can have different traffic patterns, rents, and sources of supply that affect their prices. The number and location of local competitors can also affect prices.

Source: NRCan and excerpts from the Energy Information Administration website.

Wholesale Gasoline Prices

Wholesale gasoline prices decreased in most selected centres for the **week of March 17, 2011**, compared to the previous week. Overall, price changes ranged from a decrease of nearly 5 cents per litre to an increase of 2 cents per litre.

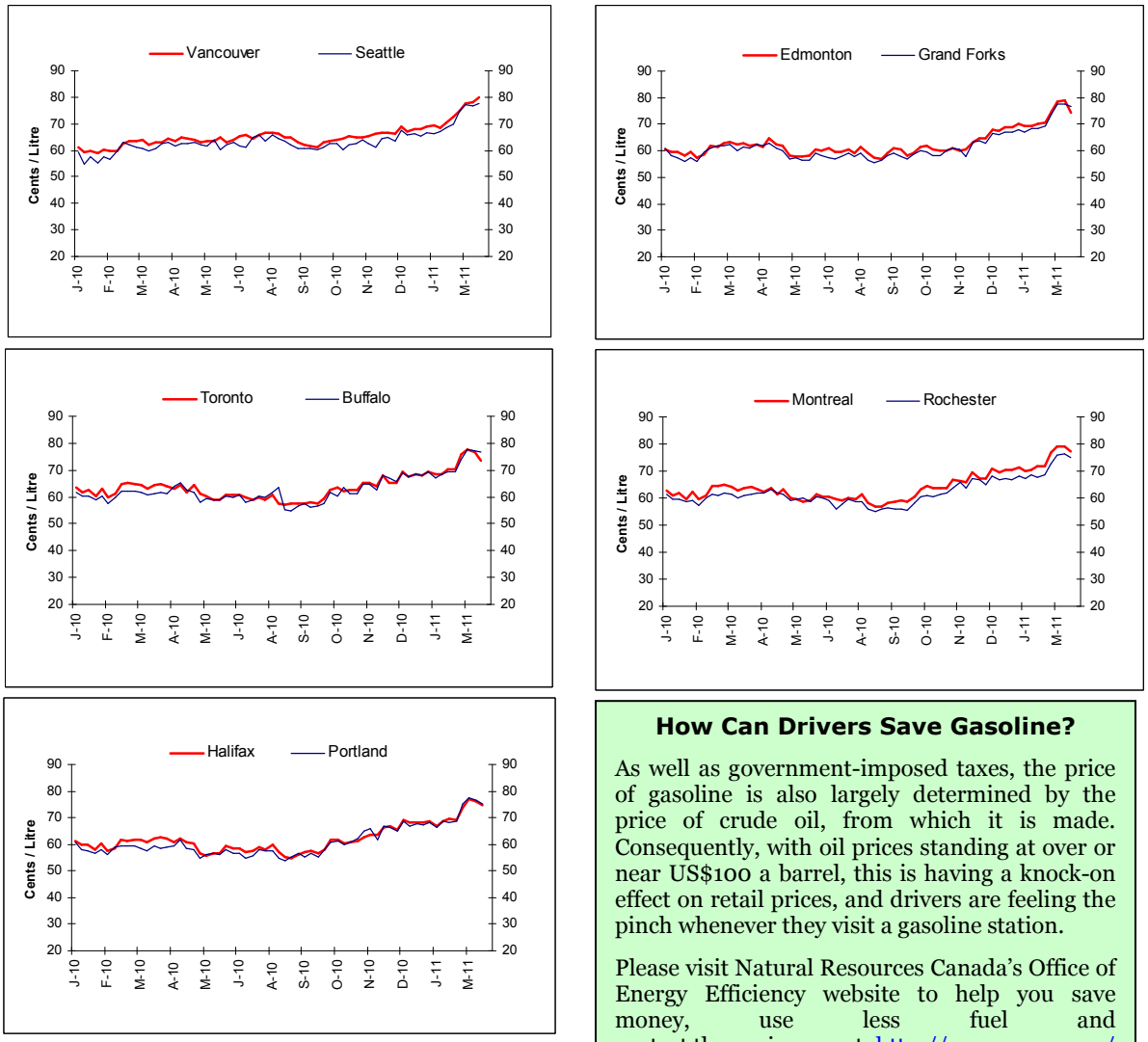
Wholesale gasoline prices in Eastern markets in both Canada and the United States have registered decreases ranging from 1 to 3 cents per litre, compared to the previous week, ending the period in the 74 to 77 cents per litre range.

In comparison, Western wholesale gasoline price changes ranged from a decline of 5 cents per litre to an increase of 2 cents per litre, ending in the range of 74 to 80 cents per litre.

In the last four weeks, wholesale prices in both Canadian and American selected centres have risen in the range of 4 to 7 cents per litre.

Overall, prices in most selected centres are above last year's level with increases ranging from 9 to 17 cents per litre, compared to the same period last year.

Figure 4: Wholesale Gasoline Prices
Rack Terminal Prices for Selected Canadian and American Cities Ending March 17, 2011
(Can ¢/L)



Sources: NRCan, Bloomberg Oil Buyers Guide

How Can Drivers Save Gasoline?

As well as government-imposed taxes, the price of gasoline is also largely determined by the price of crude oil, from which it is made. Consequently, with oil prices standing at over or near US$100 a barrel, this is having a knock-on effect on retail prices, and drivers are feeling the pinch whenever they visit a gasoline station.

Please visit Natural Resources Canada's Office of Energy Efficiency website to help you save money, use less fuel and protect the environment: http://oee.nrcan.gc.ca/transportation/personal-vehicles-initiative.cfm

Gasoline Refining and Marketing Margins

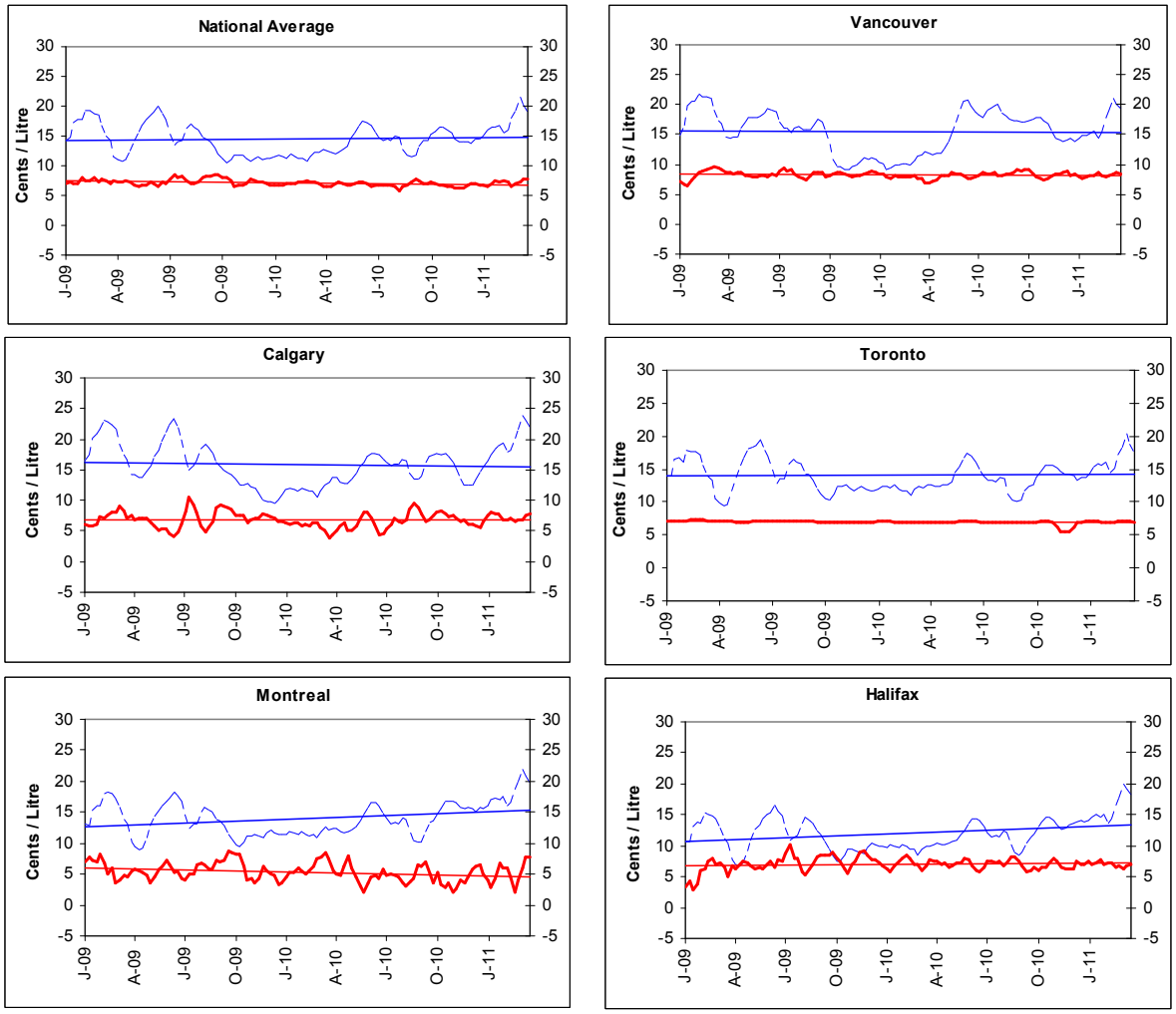
Four-week rolling averages are used for the refining and marketing margins for gasoline shown in Figure 5.

The March – April period can often present challenges for the refiners. If the early spring is colder than expected, heating oil demand will remain strong at a time when refiners are trying to convert their operations away from distillate production toward more gasoline production. Refiners need to build gasoline inventories through the spring in anticipation of the higher summer demand. This is also a time of the year that many refiners do maintenance on equipment, which often requires short term closures of specific units or even the whole refinery for a few days or a few weeks.

All of these conditions can limit the available supply of products and put upward pressure on prices, thereby increasing refining margins.

Conversely, marketing margins remained fairly stable nationally, hovering at less than 8 cents per litre as indicated by the trend line. The marketing margin is the difference between the pump price (excluding taxes) and the price paid by the retailer to purchase the gasoline. Although representing the smallest component of the retail price, in general this margin is expected to cover all the costs associated with operating the retail outlet and include a profit for the station owner.

Figure 5: Gasoline Refining and Marketing Margins
Four-Week Rolling Average Ending March 22, 2011
------- Refining Margin ——— Marketing Margin



Source: NRCan

Crude Oil Overview

Devastation in Japan and Continued Middle East Unrest Impact on Oil Prices

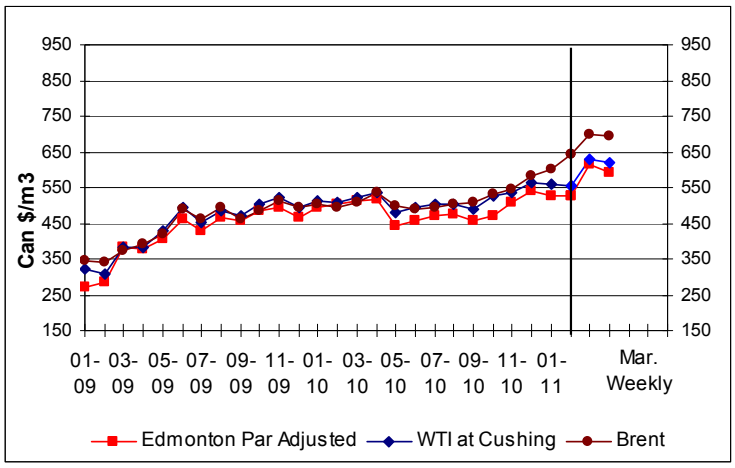
For the week ending March 18, 2011, prices for the three marker crudes averaged between $593/m³ and $694/m³, (US$96 to US$112 per barrel). This is a decrease of $4 to $24/m³ (US$2 to US$5 per barrel) from the previous week.

After a steady upward climb, world crude oil prices showed signs of a respite for the first time since October 2010. Japan's devastating earthquake and ensuing tsunami pushed crude oil prices downward, due to expectations of a reduction in oil demand, following the shutdown of six Japanese refineries with a combined capacity of 1.4 million barrels of oil. However, Japanese diesel fuel demand may increase for the production of electricity, since a quarter of Japan's nuclear power plants have been taken offline. In contrast, the continued unrest in the Middle East is continuing to provide upward pressure on oil prices.

According to some analysts, the combination of events is raising doubts about world energy demand and supply this year. A critical price indicator, U.S. inventories of crude oil and gasoline, are declining, but remain above their 5-year average level going into this year's summer driving season.

However, the U.S. Energy Information Administration's *This Week in Petroleum* raises important considerations with respect to the availability of commercial crude oil inventories. Aside from the U.S. Midwest, which has exceptional characteristics, U.S. inventories are significantly below the average for the last five years. (Source: U.S. EIA, http://www.eia.gov/oog/info/twip/twiparch/110316/twipprint.html)

Figure 6: Crude Oil Price Comparisons



Changes in Crude Oil Prices

Crude Oil Types	Week Ending: 2011-03-18		Change From:			
			Previous Week		Last Year	
	$Can/m³	$US/bbl	$Can/m³	$US/bbl	$Can/m³	$US/bbl
Edmonton Par	593.31	95.80	-24.00	-5.17	+81.03	+15.59
WTI	617.93	99.77	-16.34	-3.97	+97.65	+18.31
Brent	694.39	112.11	-3.99	-2.11	+185.55	+32.44

Source: NRCan

U.S. Short-Term Energy Outlook

West Texas Intermediate (WTI) and other crude oil spot prices have risen about $15 per barrel since mid-February partly in response to the disruption of crude oil exports from Libya. Continuing unrest in Libya as well as other North African and Middle Eastern countries has led to the highest crude oil prices since 2008. As a result, the Energy Information Administration (EIA) has raised its forecast for the average cost of crude oil to refiners to $105 per barrel in 2011, $14 higher than in the previous Outlook. EIA projects a further small increase in crude oil prices in 2012, with the refiner acquisition cost for crude oil averaging $106 per barrel and WTI averaging $105 per barrel.

The recent rapid increase in spot crude and gasoline prices has led to a significant rise in retail product prices. Motorists currently experiencing a jump in pump prices will likely see further increases from now through the spring since the recent increase in crude oil prices has not yet been fully passed through to gasoline prices. Rising crude oil prices are the primary reason for higher retail prices, but higher refining margins are also expected to be a contributing factor.

Source: EIA, http://www.eia.doe.gov/emeu/steo/pub/contents.html