# 2007 Annual Review

The Fuel Focus 2007 Annual Review presents this year's highlights of the domestic gasoline market. Since its inception in July 2006, Fuel Focus has provided readers with regular information on the various aspects of the Canadian gasoline markets and the economic drivers influencing prices.

In this issue we summarize the events that pushed gasoline prices to relatively high levels during the vear.

## **Highlights**

- Overall, 2007 was characterized by a rapid decline in gasoline prices in the first month of the year followed by a sharp increase, peaking at \$1.16 in May, and ending the year at \$1.06 per litre, or 13 cents per litre above 2006.
- The rise in retail gasoline prices in the first half of 2007 was primarily the result of tight supply. Unusually extensive North American refinery outages in the early part of the year, combined with the rising summer demand, caused prices to increase much earlier in the season. In the latter part of the year, pump prices were influenced by the significant rise in crude oil prices.
- Canadian retail gasoline prices remained reasonably sheltered from the influence of the record rise in crude oil prices, in part, by the strength of the Canadian currency compared to the U.S. dollar, effectively easing some of the pressure from higher wholesale gasoline prices.
- Average Canadian retail gasoline prices increased by 4 cents per litre in 2007 to nearly \$1.02 per litre compared to 98 cents per litre in 2006. Of note in 2007, gasoline prices remained above the \$1 per litre mark for most of the year and remained relatively high in the last few months of 2007, compared to the previous two years.
- Canadian and American wholesale gasoline prices averaged approximately 63 and 62 cents per litre respectively in 2007, compared to 60 and 59 cents per litre in 2006 respectively.
- Gasoline refining margins continued to be volatile throughout the year, ranging from a high of 29 cents per litre to a low of 7 cents per litre. The average margin for the year was 16 cents per litre, an increase of 2 cents per litre over 2006. Nationally, marketing margins increased 0.6 cent per litre from last year to nearly 6 cents per litre.
- World crude oil prices for the three crude oil benchmarks averaged between \$480 and \$486/m<sup>3</sup> (\$US72 to \$US73/bbl). Overall, the rising Canadian dollar helped dampened the impact of higher crude oil costs. While oil prices rose by \$US7/bbl in 2007, over 2006, the increased was only \$3/bbl in Canadian dollars.

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

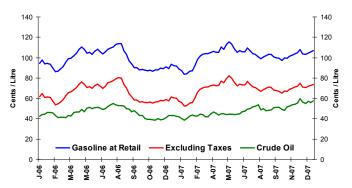
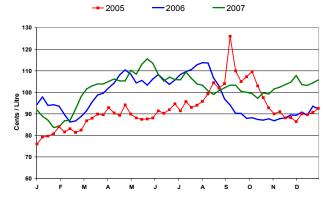


Figure 2: Weekly Regular Gasoline Prices



#### **Changes in Fuel Prices**

	Annual					
¢/L	2007	2006	Change			
Gasoline	101.8	97.7	+4.1			
Diesel	101.1	97.1	+4.0			
Furnace Oil	86.0	82.5	+3.5			

Source: NRCan

In this Issue	page
Highlights	1
Retail Gasoline Overview	2
Wholesale Prices	3
Refining and Marketing Margins	4
Crude Oil Overview	5
Supplement	6

#### **Fuel Focus Supplement:**

Provides an index of some of the information and analysis provided throughout the year.







### **Retail Gasoline Overview**

The annual average gasoline pump price in the selected cities shown in Figure 3 was \$1.02 per litre in 2007, an increase of 4 cents per litre compared to 2006.

The rise in retail gasoline prices in the first half of the year was primarily due to unusually extensive refinery outages throughout North America, rising summer demand for gasoline, and substantial inventory drawdowns. Conversely, in the latter part of the year, pump prices started to decline, from a peak of \$1.16 per litre in May, as refining capacity improved, demand for gasoline eased and inventory levels improved. Towards the latter part of the year, prices increased due to higher crude oil prices.

Crude oil, the main pump price component, averaged approximately 48 cents per litre in 2007, an increase of 2 cents per litre from the previous year.

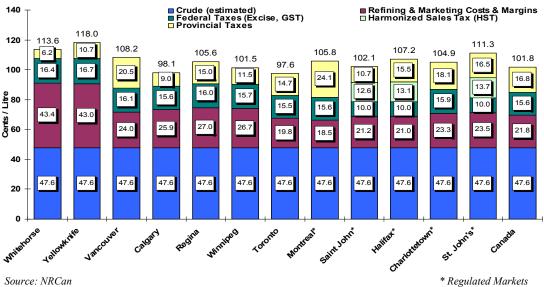
Along with crude oil, the refining and marketing costs

and margins component of the pump price also contributed to the rise in the average retail pump price registering an increase of 2.6 cents per litre in 2007 over 2006.

In 2007, federal and provincial taxes accounted for a total of 32 cents per litre of the total gasoline price at the pump, down 0.3 cent per litre from 2006.

Western markets (Vancouver to Winnipeg) registered on average an increase of approximately 5 cents per litre in gasoline prices in 2007 over 2006 mainly due to higher refining and marketing costs and margins. In contrast, Eastern centres (Toronto to St. John's) registered an increase on average of 2.5 cents per litre, with the exception of Saint John, New Brunswick, where prices declined mainly as result of lower provincial taxes. Charlottetown also offset some of the increase in retail gasoline prices through lower provincial taxes.





Regular Gasoline Pump Price Components in Selected Cities													
Change in Annual Average for 2007 over 2006													
Selected Cities	WH	YK	VA	CY	RE	WG	то	ML	SJ	нх	СН	SJ's	CA
Provincial Taxes								0.3	-2.9		-2.7		-0.1
HST									-0.5	-0.1			
Federal Taxes	-0.3	0.1	-0.2		-0.1	-0.2	-0.2	-0.2			-0.4		-0.2
R & M Costs and Margins	2.7	7.6	2.9	4.3	3.6	4.0	2.0	2.3	0.7	1.6	2.8	1.5	2.6
Crude Oil	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Total	4.2	9.5	4.5	6.1	5.3	5.6	3.6	4.2	-0.9	3.3	1.5	3.3	4.1

Note: The GST and HST were reduced by one percentage point to 6% and 14% respectively on July 1, 2006. Empty fields means no changes from 2006 to 2007. Federal Taxes include the excise tax and the GST where applicable.







### **Wholesale Gasoline Prices**

In 2007, wholesale gasoline prices in Canada and the U.S. followed similar trends, with the annual average in Canada at 63 cents per litre, slightly higher than the 62 cents per litre in the selected American centres.

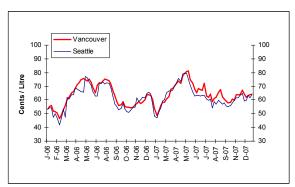
The graphs show the seasonal variations and the impact of unpredictable supply constraints during the summer driving season. The upward pressure on wholesale gasoline prices by mid-year was related mainly to apprehensions about lower U.S. gasoline inventories at a time when demand for gasoline increases. However, the appreciation of the Canadian dollar compared to the U.S. dollar helped dampen the

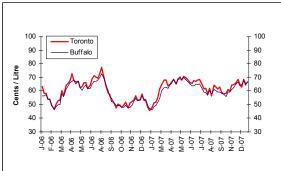
impact of the rising crude oil cost on both the wholesale and retail prices.

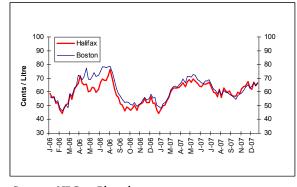
In 2007, prices fluctuated between approximately 61 and 65 cents per litre in the Canadian markets and between 61 and 64 cents per litre in the competing U.S markets. Overall, Canadian and American wholesale gasoline prices followed each other closely.

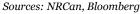
Wholesale gasoline prices in most selected centres were well above last year's level with increases ranging from 1 to 15 cents per litre, in Vancouver and Montreal respectively, while Seattle prices decreased by 2 cents per litre compared to 2006.

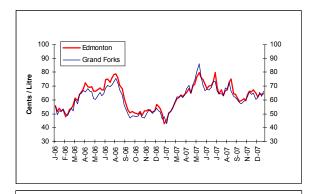
**Figure 4: Wholesale Gasoline Prices** (Weekly Average)
Rack Terminals Prices for Selected Cities ending December 27<sup>th</sup> (Can ¢/L)













Average Canadian and American Rack Prices in Selected Centres								
	Canadian	American						
2007	63.1	62.1						
2006	59.6	59.0						
Change	+3.5	+3.1						

Note: Average of the five centres shown for each country.





# **Refining and Marketing Margins**

**Refining margins for gasoline** continued to be volatile throughout 2007. Margins (four-week rolling average) ranged from a high of 29 cents per litre to a low of 8 cents per litre. In comparison, margins fluctuated in the range of 22 and 7 cents per litre in 2006. Overall, refining margins increased only 2 cents per litre to 16 cents per litre in 2007 compared to the previous year.

Refinery margins reflect market conditions. When supplies are tight, margins go up as refiners use higher prices as a mechanism to bring supply and demand into balance. In 2007, there were a number of supply disruptions and constraints which led to wide fluctuations in margins.

In the spring of 2007, a larger than normal number of refineries across North America had to temporarily close down or reduce output while they conducted long overdue maintenance work. Many of these turnarounds had been postponed in the post-Katrina and Rita hurricane period when both supplies and maintenance

workers were scarce. Throughout the year, refinery capacity utilization rates were at, or close to maximum, adding further pressure to markets.

In addition, other events contributed to the supply tightness such as the fire at Imperial's Nanticoke refinery on February 15<sup>th</sup>, resulting in product shortages in Ontario, and the fire at Shell's Scotford Upgrader in November which further tightened supplies in Western Canada.

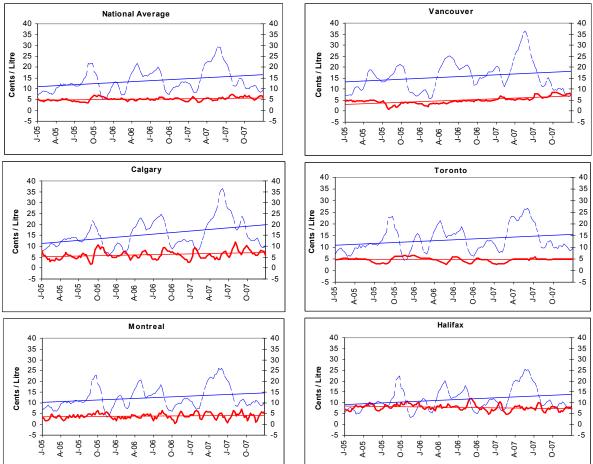
By comparison, marketing margins were much more stable than refining margins, fluctuating over a much narrower range. Nationally, the average margin increased slightly, from last year, by nearly 1 cent per litre to 6 cents per litre. Among the five centres featured in Figure 5, Calgary showed the widest fluctuations with margins moving in the 8 cents per litre range in 2007, more than a cent per litre above 2006. Montreal ended the year with the lowest average marketing margins at 4 cents per litre, or 1 cent per litre above 2006, while Halifax ended the year at nearly 7.5 cents per litre, but 0.4 cent per litre below 2006.

Figure 5: Refining and Marketing Margins (Four Week Rolling Average)

------ Refining Margin

National Average

Vancouver



Source: NRCan







### **Crude Oil Overview**

To say the least, 2007 was an interesting year for crude oil prices. Geopolitical events, a downturn in the U.S. economy and increased market trading led to a record setting year for crude oil prices. In 2007, the average crude oil price increased between \$12 and \$23/m³ (\$US6 to \$US8 per barrel) over 2006 reaching between \$480 and \$485/ m³ (\$US72 to \$US73 per barrel). The following is a summary of the more significant events affecting the price of crude oil in 2007:

**Refinery Outages**: Higher than normal refinery outages across North America throughout the year led to higher prices in anticipation of inventory draws at start-up.

**U.S. Dollar Depreciation**: Quite possibly the most influential event affecting crude oil prices this year was the significant depreciation of the U.S. currency due in part to credit problems in the sub-prime mortgage market. While Canadian consumers were somewhat shielded from the high prices due to an appreciating Canadian dollar relative to the U.S. currency, U.S. consumers were faced with crude prices that almost doubled on the New York Mercantile Exchange from just over \$US50 per barrel in January to a record high of \$US98.18 per barrel on November 23<sup>rd</sup>.

Geopolitical Activities: Tensions between Iran and the international community (in particular the U.S.) due to allegations of nuclear arms production continued throughout 2007. With the U.S. being a significant importer of Iranian crude oil, this caused concerns that the situation could escalate and result in domestic shortages. Continued violence and vandalism in Nigeria suppressed crude oil production of the largest African producer for much of 2007.

**OPEC**: The cartel continues to be a major player in world oil markets. Production fluctuations have had a

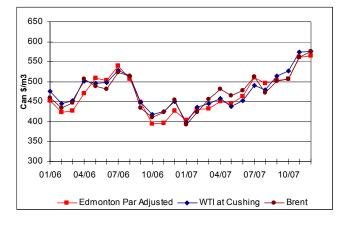
significant impact on international prices no matter how insignificant the change in quotas. Excluding Iraq and Angola, OPEC announced a 500,000 bbl/day increase on February 1 and a 500,000 bbl/day decrease on November 1, leaving production quotas from the beginning and at the end of 2007 virtually unchanged.

Oil Commodity Trading Activities: There has been a significant increase in paper trading of crude oil on world markets over the last few years (2005 to 2007). While the effects of increased trading activity are hard to quantify, it appears that speculative trading has, at the very least, increased the level of volatility in crude oil prices.

**Weather Related Activities**: Hurricane activity in 2007 was relatively quiet and disrupted very little crude oil production or refining activities – although it seems that crude prices still contained a premium reflecting the possibility of hurricane activity during the official season that lasts from June to November.

As has been the case for decades, predicting the price of crude oil into the future has proven to be no small task (arguably impossible). Looking back, there were varying views on where the price of crude oil would end up in 2007 based on different supply and demand assumptions, levels of geopolitical activity and predictions about where economies would head in the New Year. It is important to remember that when looking at these forecasts they represented what could happen in fairly specific scenarios. Late in 2006, different analyst's projections of the 2007 average ranged from \$US38 and \$US77 per barrel with the average of these forecasts being around \$US63 per barrel. As the price of WTI averaged \$US72 per barrel in 2007, on the whole forecasters underestimated its price by about \$US9 per barrel.





**Changes in Crude Oil Prices** 

Crude Oil	Annual									
Types	200	)7	200	)6	Change					
	\$Can/ m³	\$US/ bbl	\$Can/ m³	\$US/ bbl	\$Can/ m³	\$US/ bbl				
Edmonton Par	480.44	71.93	457.93	64.25	+22.51	+7.68				
WTI	482.44	72.25	470.86	66.03	+11.58	+6.22				
Brent	485.55	72.65	464.66	65.16	+20.89	+7.49				

Source: NRCan





## **2007 Fuel Focus Supplements**

The following provides an index of the information and analysis provided as Supplements throughout the year. To view the full content of each Supplement, please follow the link.

Historical Crude Oil Prices - http://fuelfocus.nrcan.gc.ca/issues/2007-02-02/supplement e.cfm

Historical Gasoline Prices - http://fuelfocus.nrcan.gc.ca/issues/2007-02-16/supplement e.cfm

Temporary Oil Refinery Interruptions and Petroleum Product Prices – http://fuelfocus.nrcan.gc.ca/issues/2007-04-27/supplement e.cfm

The Impact of U.S. Gasoline Inventories on North American Gasoline Prices - http://fuelfocus.nrcan.gc.ca/issues/2007-05-11/supplement\_e.cfm

World Oil Demand - http://fuelfocus.nrcan.gc.ca/issues/2007-05-25/supplement e.cfm

Petroleum Product Market Outlook – May 2007 - <a href="http://fuelfocus.nrcan.gc.ca/issues/2007-06-08/supplement">http://fuelfocus.nrcan.gc.ca/issues/2007-06-08/supplement</a> e.cfm

**Refinery Maintenance Operations** - <a href="http://fuelfocus.nrcan.gc.ca/issues/2007-06-22/supplement">http://fuelfocus.nrcan.gc.ca/issues/2007-06-22/supplement</a> e.cfm

Why Gasoline Prices Vary Across Canada? - <a href="http://fuelfocus.nrcan.gc.ca/issues/2007-08-03/supplement\_e.cfm">http://fuelfocus.nrcan.gc.ca/issues/2007-08-03/supplement\_e.cfm</a>

 $\label{lem:condition} \begin{tabular}{ll} \textbf{Impact of the Rising Canadian Dollar on Gasoline Prices} - $$\underline{\text{http://fuelfocus.nrcan.gc.ca/issues/2007-08-17/supplement}} $$e.cfm $$$ 

Refineries in Canada 2007 - http://fuelfocus.nrcan.gc.ca/issues/2007-08-31/supplement e.cfm

Understanding Differences in Retail Gasoline and Diesel Prices - http://fuelfocus.nrcan.gc.ca/issues/2007-09-28/supplement e.cfm

**Top Oil Production and Reserves Holders** - <a href="http://fuelfocus.nrcan.gc.ca/issues/2007-10-12/supplement\_e.cfm">http://fuelfocus.nrcan.gc.ca/issues/2007-10-12/supplement\_e.cfm</a>

The Ten Top World Oil Producing Companies - <a href="http://fuelfocus.nrcan.gc.ca/issues/2007-10-26/supplement">http://fuelfocus.nrcan.gc.ca/issues/2007-10-26/supplement</a> e.cfm

Canadian Petroleum Market Outlook – Fall 2007 - <a href="http://fuelfocus.nrcan.gc.ca/issues/2007-11-09/supplement\_e.cfm">http://fuelfocus.nrcan.gc.ca/issues/2007-11-09/supplement\_e.cfm</a>

Residential Heating Oil: Ways to Reduce your Heating Bill - http://fuelfocus.nrcan.gc.ca/issues/2007-11-23/supplement e.cfm

Historical Comparison of Gasoline Prices and Other Consumer Components - http://www.fuelfocus.nrcan.gc.ca/issues/2007-12-07/supplement e.cfm



