



## Retail Gasoline Prices Remained Low in the Fourth Quarter of 2015 as Crude Prices Continued to Decline.

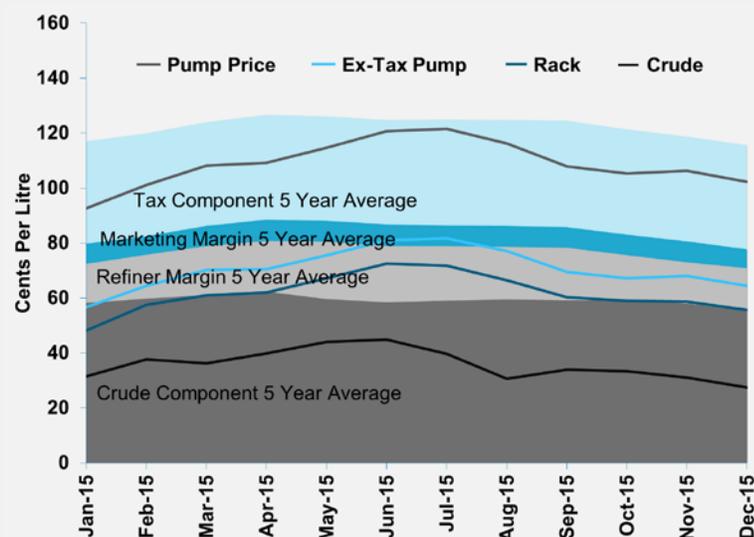
*Global crude markets continued to feel the effects of a supply glut, with prices falling steadily throughout the fourth quarter. Decreased crude input costs more than offset refining margins that were driven higher by the continued depreciation of the Canadian dollar. Strong diesel inventory builds - a result of robust refinery runs throughout 2015 - kept diesel prices relatively low at a time of year when rising distillate demand typically leads to higher prices.*

Consistently low crude prices have generally led to lower finished product prices in 2015, which has generated relatively strong demand for refined products. The increased demand has driven up utilization rates at refineries, and helped push refining margins on gasoline to unseasonably high levels. In turn, this has encouraged refiners to produce larger amounts of finished gasoline. A consequence of increased gasoline production is increased diesel production. The fourth quarter is typically characterized by rising diesel refining margins (because of increased demand for heating fuel), but strong distillate refinery runs have those inventories at the high end of their five-year historical average, keeping downward pressure on wholesale diesel prices. **Figures 1&2** show the historical movement of retail gasoline and diesel prices in Canada along with their component prices.

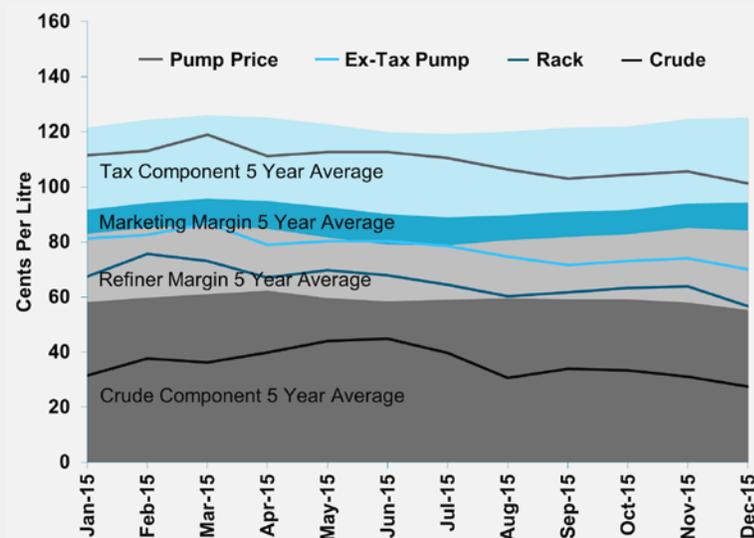
WTI, a key North American crude benchmark, fell 17.7 percent over the quarter, to end the year at 37.09 \$US/BBL; its price fell steadily during the last month of 2015. The benchmark Brent crude price fell 23.4 percent in fourth quarter to end December at 36.18 \$US/BBL, nearly a full dollar below WTI. The Brent premium to WTI peaked mid-November at 3.74 \$US/BBL before beginning to shrink, and then reversing in mid-December, just as the 40 year old ban on U.S. crude exports was lifted. The quarter ended with WTI having a premium to Brent of 0.91 \$US/BBL. The trend in softening crude prices towards the end of 2015 was primarily a result of a growing surplus of supply, and demand concerns surrounding a weakening economic outlook in China and other emerging economies.

Like global crude prices, Western Canadian Select (WCS) also fell over the quarter, falling 20.8 percent. The WTI premium to WCS peaked early in the October at 15.61 \$US/BBL, before narrowing the remainder of the quarter to finish at a 13.30 \$US/BBL at the end of December. This shrinking discount is partially attributable to the reversal of Enbridge's Line 9B pipeline on December 1<sup>st</sup>, which helped expand the reach of western Canadian crude into additional markets.

**Figure 1: Canadian Average Regular Gasoline and Component Prices**



**Figure 2: Canadian Average Diesel and Component Prices**



## Gasoline and Diesel Market Overview

The Canadian average retail gasoline price fell from third quarter to an average of 102.3 cents per litre in December, as crude prices and downstream margins declined. The average Canadian crude input cost reached a seven year low (27.4 cents per litre) in December - a level not seen since January 2009. Additionally, both refining and marketing margins declined from record highs in the previous quarter; largely a response to normal seasonal moderation of gasoline demand, and a corresponding small dip in refinery utilization rates.

Late summer refinery issues in the Midwest began to ease in November, and shortly afterward the elevated wholesale prices throughout the region began to subside. However, some regional disparity continued throughout the fourth quarter as west coast wholesale prices rose as much as fifteen cents per litre above the rest of Canada. Like the Midwest supply issues in the previous quarter, refinery issues on the west coast are driving up wholesale prices in that region.

Figure 3: Canadian Average Gasoline and Diesel Price Components for 4<sup>th</sup> Quarter 2015



Falling diesel refining margins ended the quarter at 29.2 cents per litre - 8.6 cents per litre lower than last year at this time. Strong refinery production and a mild start to the winter pushed diesel stocks well above where they had been in previous years. This drove diesel margins lower and led to the uncharacteristic fourth-quarter drop in diesel prices.

West coast refinery issues had a disparate effect on gasoline and diesel prices. As gasoline prices were driven higher, diesel prices remained low, partly attributable to higher relative inventory levels for diesel in the west. Another contributor to the exaggerated effect on gasoline prices is the number of unique gasoline specifications in the region. This limits the fungibility of the product, and affects the ability to address supply related issues through the import of product. (Figure 3)

## Market Outlook for the next Quarter

The first quarter will be characterized by lower gasoline demand, generally putting downward pressure on prices. Combined with expected low crude costs, we will likely see gasoline prices remain low until early spring when refineries start to make preparations for the summer driving season. As early as February, there will likely be some supplytightening as refineries schedule their turnarounds to switch over to more expensive summer gasoline blends. This will likely lead to higher wholesale gasoline prices that will continue as gasoline demand rises towards the end of the quarter.

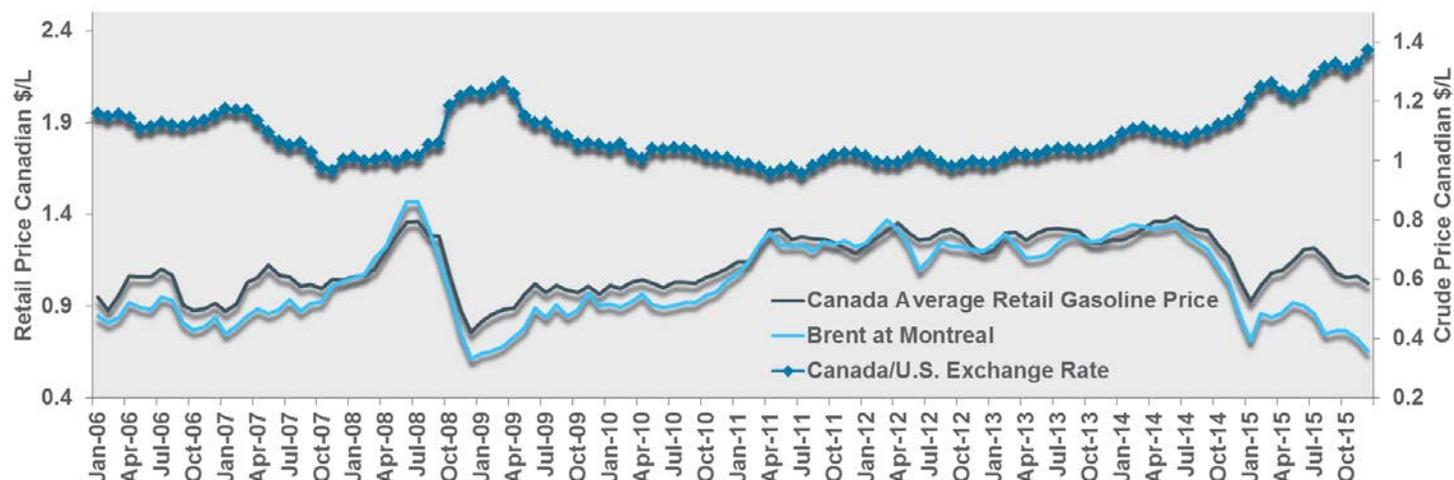
Diesel prices are heavily influenced by the demand for heating fuel, and so typically, prices are relatively high in the first quarter. However, diesel inventories are high, and it is expected that this will provide a buffer from higher diesel prices over the winter months.

# An Examination of the Relationship between Crude and Retail Gasoline Prices in Canada

It has been noted recently that Canadian retail gasoline prices are not following the movements of crude prices, and that there is a growing gap between these two price points (**Figure 4**). The implication is that the full value of the decline in crude prices is not being passed along to consumers, and while this is what has happened in a factual sense, this disparity is a product of several factors that have historically caused pump price changes to not necessarily respond to crude prices in a direct manner: strong demand, high refinery utilization rates (and thus high refining margins), and a weakened exchange rate relative to the US dollar.

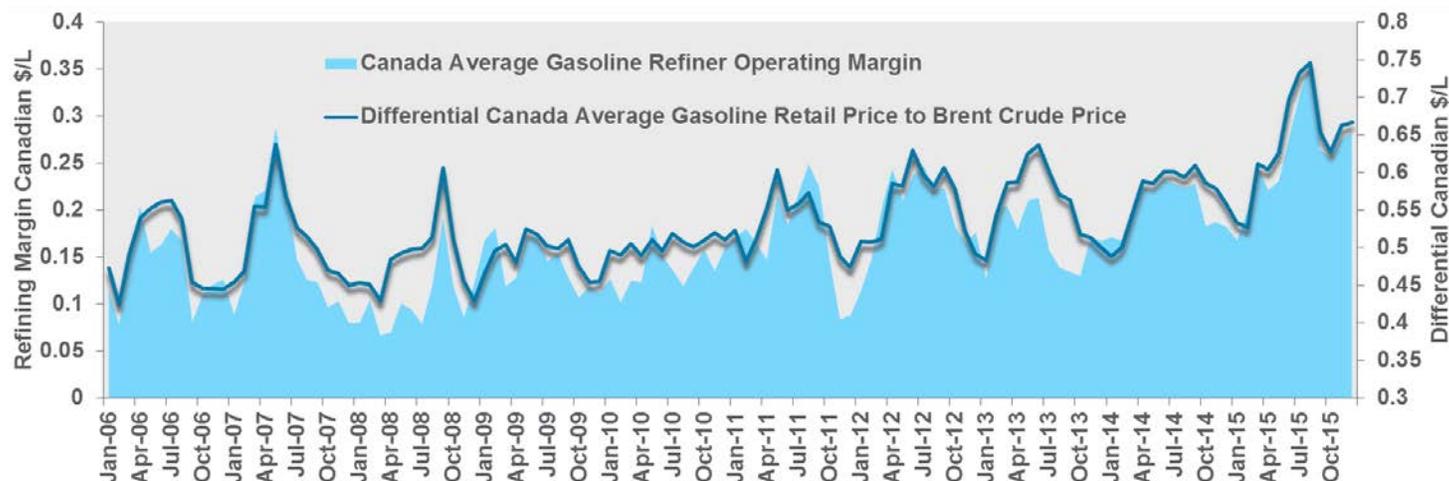
There are three factors that separate the price of crude oil from retail pump prices: refining margins, retail margins, and taxes. Taxes are largely fixed in nature (i.e. they are mostly levied on a per litre basis, not a percent of the price), and together with relatively stable retail margins, they effectively “pass along” whatever changes occur with crude prices to the retail pump price. The remaining factor that contributes to the “disconnect” between crude and pump prices is therefore the refining margin, as illustrated in **Figure 5**.

**Figure 4: Canada Average Retail Gasoline Price vs Brent Crude Price 2006-2015**



Canada is a net exporter of both crude and refined product; the majority of this trade being with the U.S. The tenets of free trade with the U.S. requires that both crude and refined product prices remain competitive with relevant U.S. markets on an exchange adjusted basis. While the impact of exchange rates on wholesale product prices was discussed in a previous release of this newsletter, not specifically addressed was the disparate effect of exchange rates on crude and wholesale product prices, and ultimately, the impact on refining margins.

**Figure 5: Canada Average Refining Margin vs Differential in Retail Gasoline Price and Brent Crude Price 2006-2015**



The proportional magnitude difference between crude and wholesale product prices results in an unequal exchange rate impact that eventually materializes in that product's Canadian dollar refining margin. For example, December's average Canadian crude price was 27.4 cpl (cents per litre), or 20.0 cpl when adjusted for the December's average exchange rate of 1.37 \$CDN>US; while December's average Canadian wholesale gasoline price was 55.6 cpl, or 40.6 cpl when adjusted for exchange. In short, crude priced in Canadian dollars was 7.4 cpl higher than it would have been if the dollar were at parity, while wholesale gasoline was 15.0 cpl higher. The difference between those two adjustments - 7.6 cpl, or roughly one quarter of the average December refining margin - shows up directly in the Canadian dollar refining margin for gasoline.

The relative (unadjusted) 2015 Canadian crude and retail prices appear to dramatically diverge from one another (**Figure 4**), but when adjusted for exchange and inflation (**Table 1**) refining margins are actually lower in 2015 than they were in 2012 and the adjusted spread between crude and retail prices is not much different.

**Table 1: Adjusted and Unadjusted Spread between Crude and Retail Prices (By Component)**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Canada/U.S. Exchange Rate	1.13	1.07	1.07	1.14	1.03	0.99	1.00	1.03	1.10	1.28
Unadjusted Canadian Gasoline Refining Margin (cpl)	13.8	15.3	10.3	14.2	13.8	17.3	19.8	17.0	20.3	25.9
Unadjusted Canadian Gasoline Taxes & Retail Margin (cpl)	37.8	38.2	39.3	38.9	41.0	45.5	46.3	46.9	47.6	47.1
Unadjusted Canadian Gasoline spread between Retail/Crude (cpl)	51.6	53.5	49.6	53.1	54.8	62.8	66.1	63.9	67.9	73
Adjusted Canadian Gasoline Refining Margin (cpl) ***	12.2	14.0	9.3	11.8	12.5	15.9	17.8	14.7	16.1	17.4
Adjusted Canadian Gasoline Taxes & Retail Margin (cpl) ****	37.8	37.4	37.6	37.1	38.4	41.4	41.5	41.7	41.5	40.5
Adjusted Canadian Gasoline spread between Retail/Crude (cpl)	50.0	51.4	46.9	48.9	50.9	57.3	59.3	56.4	57.6	57.9
Canadian Utilization Rate (%)	95.9	100.1	94.3	89.7	91.0	85.0	87.9	89.7	88.3	90.0**
Canadian Inflation Rate	100.0	102.2	104.6	104.9	106.8	109.8	111.5	112.5	114.7	116.4*

\*Based on average of first eleven months of 2015

\*\*Estimated based on preliminary data

\*\*\*Adjusted for inflation and exchange rate impact

\*\*\*\*Adjusted for inflation only, exchange rates have limited impact on tax and retail margin components

The average unadjusted spread between Canadian retail and crude prices has risen over the last 10 years, and there is a precedent for the size of the current spread. Periods of unadjusted spreads between 60-75 cpl (retail less crude) have opened up at least 7 times since 2006 (**Figure 5**), most of which occurred during periods characterized by some combination of high utilization rates, high refining margins or weakened exchange rates.

Evaluating and understanding the relationship (differential) between retail and crude pricing in Canada requires an understanding of the role of each value-chain factor that contributes to that price differential, as well as the impact of a number of other recognized factors, such as exchange rates, utilization rates, etc. When adjusted for the level with which these factors are influencing the price components there is a relative degree of consistency in the amount of value being passed along from the changes in crude to retail prices.