



Canadian Gasoline Prices Closely Followed Shifts in Crude Prices over the Fourth Quarter, While Diesel Prices Rose Steadily, Both Ending the Year at their Highest Levels in 2016.

After falling in November, crude prices climbed over the second half of the quarter reaching their highest point since July 2015, ultimately sending retail gasoline prices to a 6 month high and diesel prices to a 15 month high.

The decision by the Organization of Petroleum Exporting Countries (OPEC) in November to fix crude oil production limits, reversing their recent policy to abandon such limits, sent crude markets upward after an extended period of sustained low prices. Crude markets reacted quickly to OPEC’s decision, along with additional agreements made with non-OPEC members on crude production limits, causing crude prices to rise to their highest levels since July 2015. Gasoline prices continued to follow the movement of crude prices this past quarter ending 2016 higher despite the softening demand that is typical of the 4th Quarter.

Canadian diesel prices rose throughout the last quarter, following higher crude prices and stronger North American demand. Typically, diesel demand increases in fall/winter because of increased heating oil consumption; however, there was also an uptick in distillate demand from increased industrial activity. **Figures 1&2** show the historical movement of retail gasoline and diesel prices in Canada along with their component prices.

WTI and Brent, key North American and international crude benchmarks respectively, fell in the first half of the quarter as a global crude glut persisted. However, following OPEC’s announcement in late November, crude prices rose steadily through to the end of the year. WTI fell to a low of 43.31 \$US/BBL and Brent to 43.13 \$US/BBL in mid-November before climbing. WTI ended the quarter at 53.74 \$US/BBL, 11.8 percent higher than the start of the quarter. Similarly, Brent ended the quarter at 55.89 \$US/BBL, roughly 15 percent higher. The spread between WTI and Brent averaged just 0.48 cents per litre in favour of Brent during the first two months of the quarter, but jumped immediately following OPEC’s announcement, widening to two cents per litre. This is likely a result of Brent crude being traded internationally, and thus more likely to be affected by OPEC’s announcement than would North American crude markets. Additionally, U.S. crude production began to rise after a summer low-point, and the strengthening US dollar likely dampened demand for US crude.

Similarly, Western Canadian Select (WCS) ended December 13.2 percent higher than the end of the previous Quarter. The WCS to WTI discount widened over the quarter, at the same time as imports of Canadian crude into the U.S. reached their highest level on record in

Figure 1: Canadian Average Regular Gasoline and Component Prices

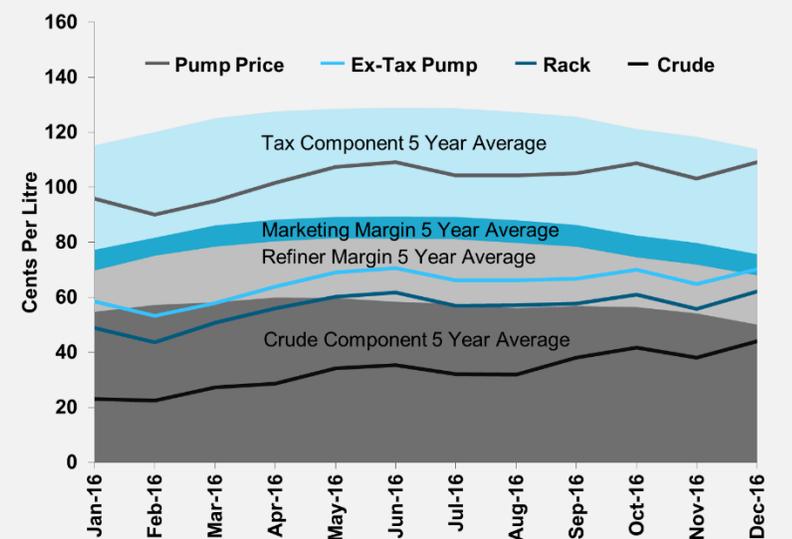
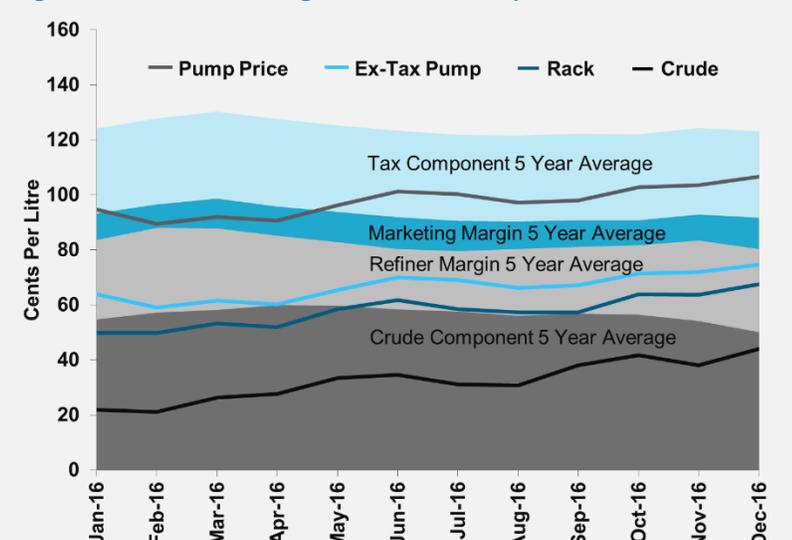


Figure 2: Canadian Average Diesel and Component Prices

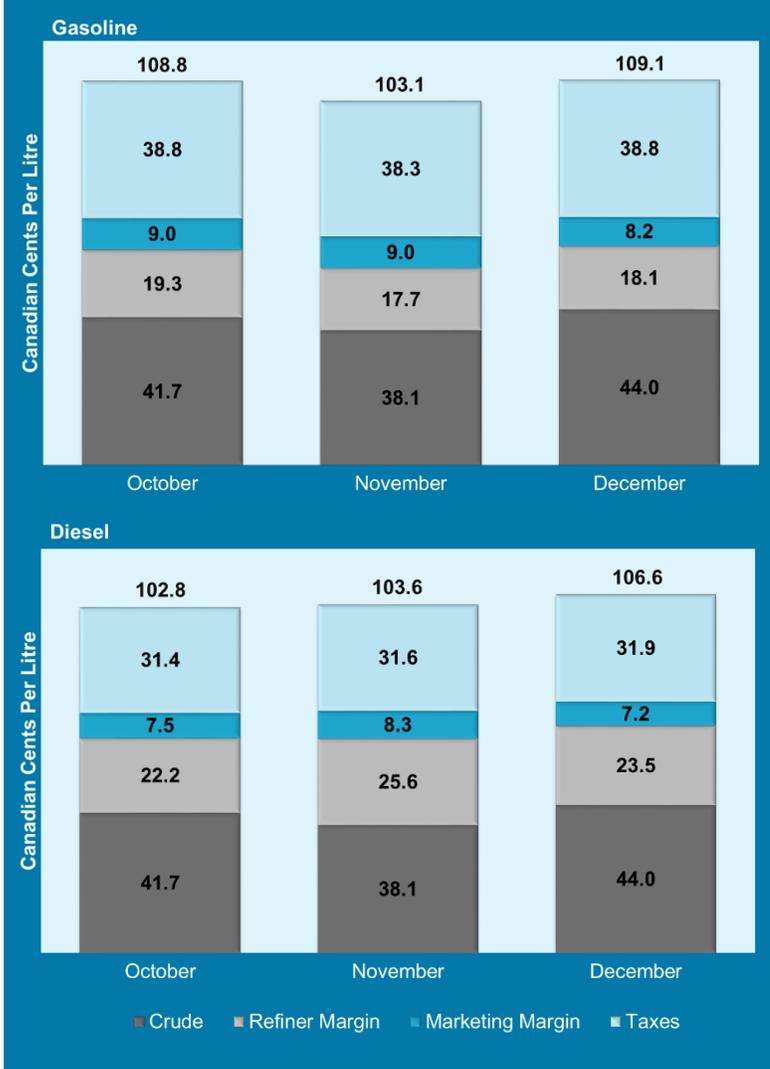


early December. The WCS to WTI discount averaged 14.77 \$US/BBL in 4th Quarter, 0.5 \$US/BBL higher than the previous quarter, peaking near the end of December at 16.58 \$US/BBL.

Gasoline and Diesel Market Overview

Typically, refining margins on gasoline are lower in the fall and winter months because of lower seasonal demand, but a weakening Canadian dollar kept upward pressure on wholesale prices and refining margins remained fairly constant over the quarter. Combined with stable retail margins and tax components, this meant gasoline prices moved in unison with changes in crude oil prices. Consequently, rising oil prices over the last month and a half of 2016 resulted in gasoline prices ending the year at a six-month high.

Figure 3: Canadian Average Gasoline and Diesel Price Components for 4th Quarter 2016



The past quarter saw a convergence of wholesale prices among different regions in Canada with most regions (with the exception of the West Coast) within a three cent per litre range. The West Coast, because of more constrained supply options, started the quarter averaging over ten cents per litre above the average wholesale price in the rest of the country, however, this spread began to shrink, ending the year at just over five cents per litre.

As is typical this time of year, rising wholesale prices from strong distillate demand sent diesel-specific rack prices to 2016 highs last month. Combined with rising crude prices, retail diesel prices ended the year at a 17-month high.

Central and Eastern regions of Canada saw higher diesel refining margins than Western regions of the country this past quarter. Demand picked up in East Coast regions because of their heavy reliance on heating oil, and along with strong economic activity in Central regions, this pressured wholesale diesel prices upward. (Figure 3)

Market Outlook for the Next Quarter

Winter months are characterized by lower gasoline demand and thus softening wholesale gasoline prices. OPEC’s decision to limit crude production will likely not have a significant effect on crude prices until the global crude glut begins to clear later in 2017, so we expect crude prices to rise only marginally over the next quarter. Provincial cap-and-trade and carbon tax programs implemented in Ontario and Alberta at the beginning of 2017 will effect gasoline prices and most likely push up the Canadian average. Therefore, any softening of gasoline prices because of lower gasoline demand in the next quarter will likely be offset by rising crude prices and higher taxation.

Retail diesel prices will likely continue their upward trend into the next quarter as Canadian demand for diesel typically peaks during winter months. Additionally, diesel prices will be pressured by higher expected crude prices, and by Ontario and Alberta’s carbon pricing programs, so next quarter we will almost certainly see higher average diesel prices in Canada.

Gasoline and Diesel Prices – a Year in Review

2016 was an eventful year for petroleum prices in Canada; it began with historically low crude prices, that pushed pump prices to a seven-year low in February, and ended the year with retail prices that were nearly 20 cents per litre higher than February.

The average Canadian crude price began the year at 23.1 cents per litre – a 14 year low – but rose during the 2nd Quarter as Alberta’s wildfires limited production and transportation of crude in the west. The rise in crude prices flattened through the summer months but rose again in December, finishing the year roughly 21 cents per litre (95 percent) higher than the early year lows. Refinery throughputs were strong in the 3rd Quarter as refineries capitalized on relatively inexpensive and abundant crude supply, resulting in higher than normal inventories of finished products and continued downward pressure on retail prices. Despite strong demand for finished product, Canadian retail prices in the summer of 2016 were the lowest seasonal prices in the last 6 years. Towards the end of 2016, OPEC’s announcement and a strengthening US dollar pushed Canadian crude, wholesale and retail prices to their highest levels throughout the year. (Refer back to **Figure 1**).

Canadian retail gasoline prices in 2016 averaged 102.8 cents per litre. Taxes made up the largest component of the price of a litre of gasoline in 2016 at 38.0 cents per litre, followed by crude at 33.1 cents per litre. Canadian refining margins were 22.9 cents per litre in 2016 while retail margins were 8.8 cents per litre – while the smallest component of the pump price, this is the highest national average retail margin in Kent’s recorded history. (**Figure 4**)

Retail diesel prices averaged 97.7 cents per litre in 2016 with crude and tax components making up nearly two-thirds of that total, at 32.4 and 31.0 cents per litre respectively. The total downstream margin: comprised of the refining margin at 25.4 cents per litre, and the retail margin at 8.9 cents per litre, made up the remainder. (**Figure 4**)

Canadian vs US Prices

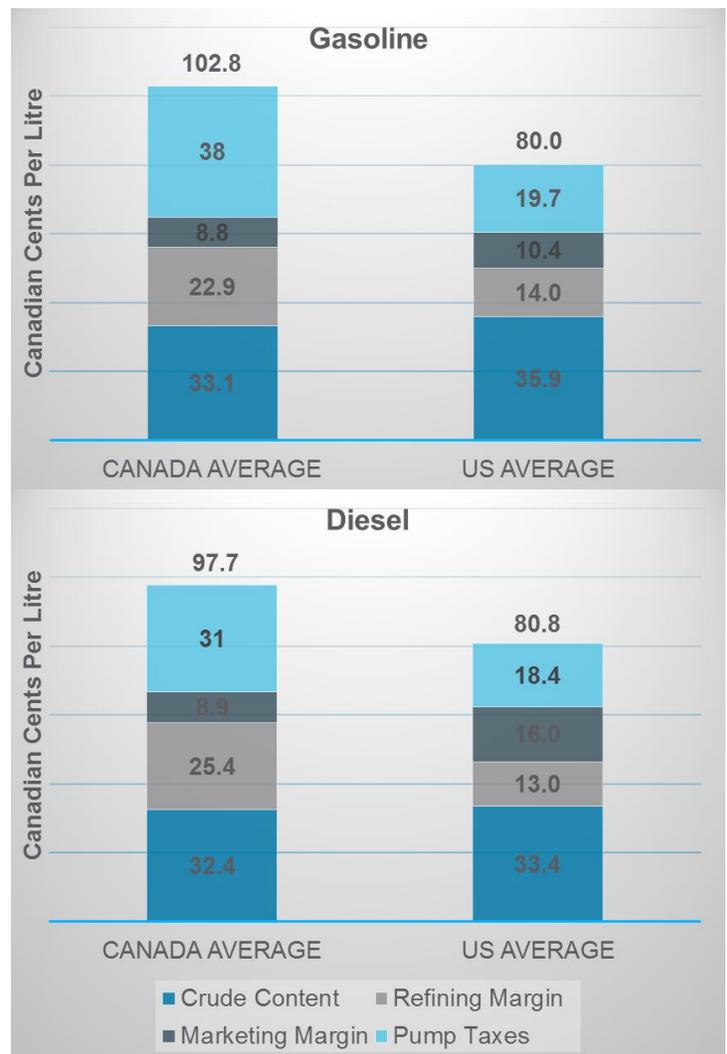
The US average retail gasoline price was 22.8 (CDN) cents per litre lower than Canada’s price in 2016, while diesel prices were 16.9 cents per litre lower. Virtually all of this difference is explained by disparate taxation rates and prevailing exchange rates. The gasoline tax component in Canada was 18.3 cents per litre higher than the average US rate, while the diesel tax component was 12.6 cents per litre higher.

In regards to the exchange rate, the Canadian dollar averaged just 75 percent of the value of the U.S. dollar in 2016, and that value continued to erode towards the end of the year. This forced Canadian wholesale prices to rise in order to remain competitive with US wholesale prices on an exchange-adjusted basis. Overall, we estimate that this cost Canadians an additional 13.8 cents per litre for gasoline and 14.2 cents per litre for diesel fuel in 2016.

Costs for Canadian Drivers

Using the most recent available Statistics Canada data, the average vehicle in Canada used roughly 36.3 litres of gasoline per week, or 1,889 litres per year. This means that the average Canadian driver spent roughly \$1,942 to fuel each vehicle in 2016, with \$718 of that going to taxes, \$625 to the crude component, \$433 to refiners, and \$166 apportioned to the retail site.

Figure 4: Canada/U.S. Component Pricing 2016

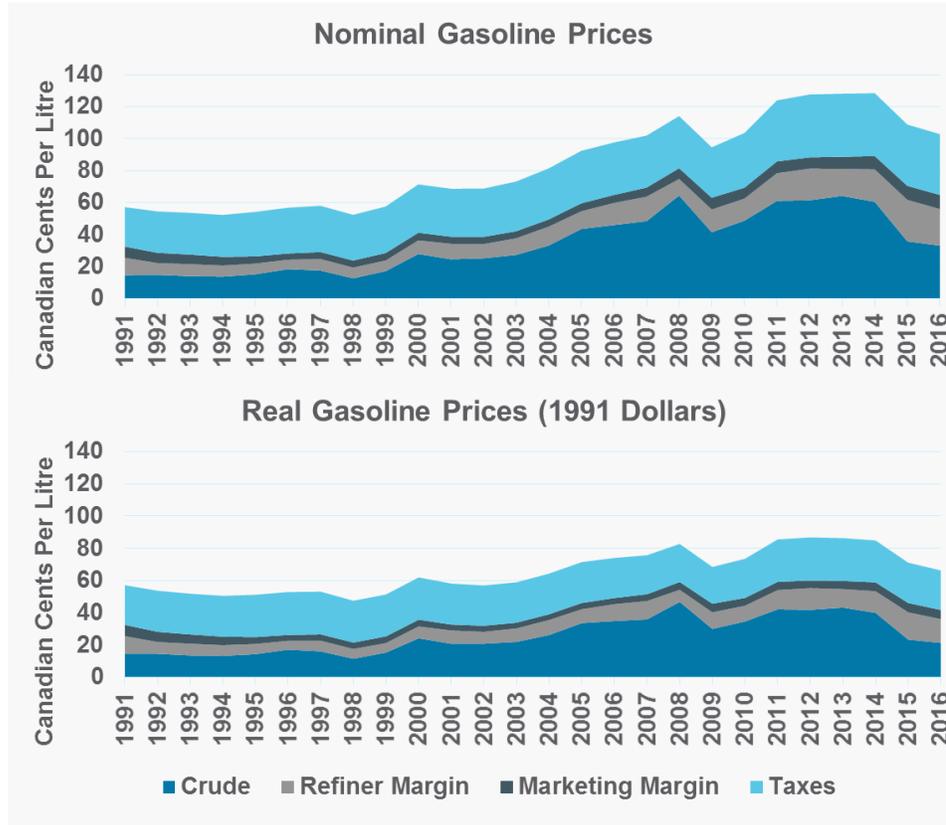


Source: Kent Group/EIA

In comparison, the average Canadian retail gasoline price in 2014 was 128.3 cents per litre, 25.5 cents per litre higher than 2016. In that year, the average Canadian vehicle likely cost roughly \$2,398 to fill for the year, thus in 2016 Canadians saved roughly \$10 billion overall, or \$450 per vehicle when compared with 2014.

2016 crude oil prices, on a nominal basis, were as low as they had been since 2004 in Canada, but how did pump prices compare with those of 2004? The average gasoline price in 2016 was 102.8 cents per litre, while the 2004 average price was 81.3 cents per litre. The non-crude components of the pump price showed significant growth over this 12 year period, most notably with gasoline refining margins, which increased nearly 11 cents per litre since 2004. This is likely attributable to refiners operating at higher average utilization rates over this period and also significant increases in the cost to convert crude into gasoline and diesel – partly a result of more restrictive environmental standards on fuel production and product formulation. Retail margins increased by 4.3 cents per litre, and the tax component for gasoline also increased by 6.1 cents per litre over that same period.

Figure 5: Canadian Gasoline Historical Pricing: Nominal and Real 1991-2016



The Impact of Inflation

Looking at gasoline prices over the last 25 years in Canada, gasoline prices ranged between 50 and 60 cents per litre during the 1990's before climbing steadily over the next decade. After experiencing a dip in 2009, prices rose again, peaking in 2014 before settling back to 2016 levels just over \$1.00 per litre.

When looking at these prices in 'real' terms - adjusting to remove the effect of inflation - 2016 pump prices would be only nine cents per litre above 1991 prices. The crude oil component accounts for roughly 6.7 cents per litre of that inflation-adjusted increase, while refining margins accounted for four cents per litre. The tax component is virtually unchanged in real terms from 1991 while retail margins have actually decreased by over a cent per litre (in 1991 dollars) over that period. (Figure 5)

Gasoline Price Outlook

So where are gasoline prices headed in 2017? The simple answer is likely a little higher. Despite uncertainty around whether refining or retail margins will rise, there is reason to believe that OPEC's decision to establish production limits means we likely won't see crude prices abate anytime soon, and in all likelihood, crude prices are likely to rise as we get further into 2017. Fuel taxes will certainly increase in Canada as provinces such as Alberta and Ontario implement carbon pricing schemes, and other provinces are likely follow suit given the federal government's mandate to ensure all provinces implement a minimum level of carbon pricing over the next five years.