



Gasoline prices reached record highs in Canada following higher crude prices and refining margins.

Diesel prices also reached a four-year high as crude prices continued to strengthen, and a weakened Canadian dollar kept refining margins elevated.

Global crude prices were pushed higher this past quarter as world supplies tightened following slowed Venezuelan oil production and the closure of Libyan ports. In addition, the U.S. announced it will exit the Joint Comprehensive Plan of Action (JCPOA) leading to re-imposed sanctions on Iranian crude. However, the June decision by the Organization of Petroleum Exporting Countries (OPEC) and Russia to reverse production cuts eased crude prices towards the end of June.

Canadian refining margins were pushed higher this past quarter because of prolonged refinery maintenance and a weakened Canadian dollar. By the end of the quarter, the U.S. dollar exchange rate added an estimated 20 cents per litre to the price of Canadian gasoline.

Strong global distillate exports contributed to declining North American distillate inventories, which fell well below levels from a year ago. Consequently, diesel refining margins averaged nearly ten cents per litre higher than a year ago. Gasoline refining margins averaged just five cents per litre higher than last year as Canadian gasoline demand dipped in response to higher retail prices. **Figures 1 & 2** show the historical movement of retail gasoline and diesel prices in Canada along with their component prices.

A tightening global crude market and geopolitical issues that threatened global crude supplies helped to push WTI and Brent higher in the early part of the quarter. Brent reached 80 \$US/BBL by mid-May, its highest level since November 2014, and despite subsequent easing for both WTI and Brent they ended the quarter higher. WTI rose 9.27 \$US/BBL, ending the quarter at 74.17 \$US/BBL, or 14.3 percent higher than the previous quarter. Similarly, Brent rose 8.88 \$US/BBL, ending the quarter at 78.53 \$US/BBL, or 12.8 percent higher than the previous quarter. Brent's premium to WTI expanded to 10.32 \$US/BBL in early June, but then retreated sharply to just 1.77 \$US/BBL following strong North American refinery inputs and the unplanned shutdown of Canadian Syncrude production.

The price of Western Canadian Select (WCS) strengthened this past quarter, rising 26.4 percent. The WCS discount to WTI expanded in early June to 25.80 \$US/BBL, before contracting quickly to 15.95 \$US/BBL within the same week. The WCS discount expanded again through the end of the quarter as logistical constraints and production issues for Canadian crude remained.

Figure 1: Canadian Average Regular Gasoline and Component Prices

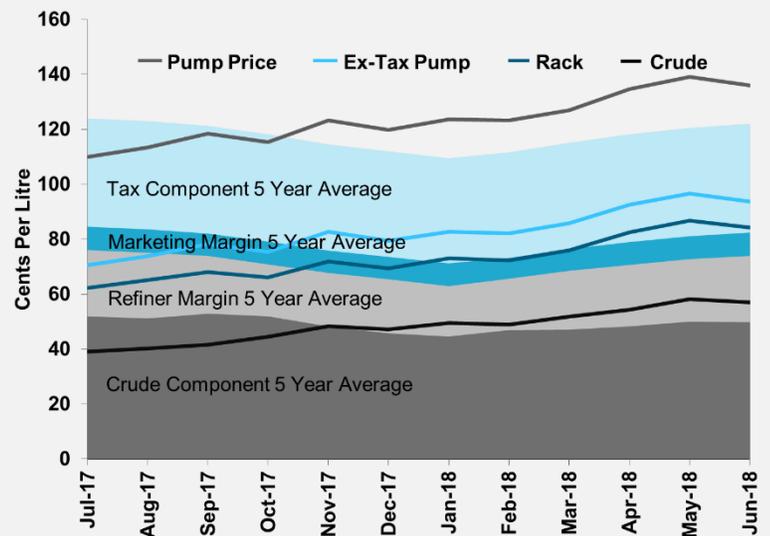
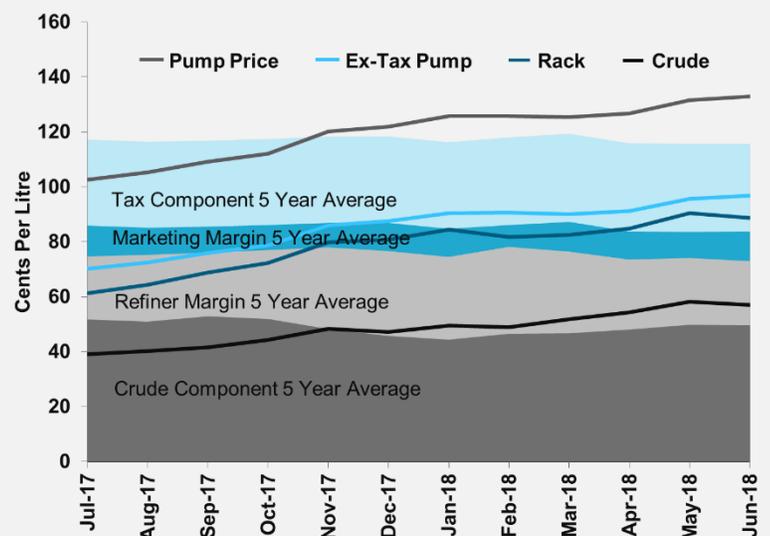


Figure 2: Canadian Average Diesel and Component Prices



Gasoline and Diesel Market Overview

Figure 3: Canadian Average Gasoline and Diesel Price Components for 2nd Quarter 2018



Higher crude prices and expanding refining margins allowed retail gasoline prices to reach a record in May. Canadian crude prices reached their highest level since September 2014 while refining margins were pushed well above their five-year average following extensive refinery maintenance and the weaker Canadian dollar.

Western-interior wholesale prices rose 14.5 cents per litres over the quarter, leading to higher regional refining margins, a reflection of tighter supply conditions brought on by prolonged refinery maintenance and high utilization rates in the U.S. Midwest. The West Coast continued to have the highest gasoline prices in the country; however, prices were fairly flat over the quarter.

Strong demand for diesel in the U.S. and abroad kept diesel refining margins from their typical seasonal decline this past quarter. Combined with higher crude costs, diesel prices across the country ended the quarter at a four-year high. Lower retail margins for diesel kept ex-tax diesel prices in line with gasoline despite higher wholesale prices.

Wholesale diesel prices rose consistently across the country, averaging 6.2 cents per litre over the quarter. Refining margins in the eastern part of Canada were squeezed somewhat as wholesale price increases did not keep pace with increased crude costs. The eastern part of Canada is largely dependent on imported crude, which had much higher prices over the previous quarter. (Figure 3)

Market Outlook for the Next Quarter

In the next few months, Canadian gasoline prices are likely to remain fairly flat as crude prices are expected to stabilize and lower levels of summer demand may ease refining margins. As is typical in the fall, demand for fuel is expected taper off further,

and with that a softening of wholesale prices barring any substantial increases to crude prices or unexpected refinery issues.

As late summer approaches many refineries will begin to adjust production yields to favour diesel as refiners begin to build inventories in anticipation of the upcoming heating season. Given that North American diesel inventories remain well below levels from a year ago, we anticipate further growth for diesel refining margins because of upward pressure on wholesale prices across the continent.

Understanding Carbon Tax and Cap & Trade Programs

As part of a broader plan to combat climate change, many governments have introduced carbon pricing through either a carbon tax or a “cap & trade” program. These programs are designed to “price-in” some or all of the social costs of carbon; the intent is to lessen demand for carbon-intensive energy sources and to encourage the use of lower-carbon alternatives by affecting their relative pricing.

Fundamentally, when you increase the price of a good or service the demand for it should decrease, and vice-versa. Both approaches to carbon pricing (carbon tax and cap & trade) increase the price of carbon-intensive energy sources like gasoline and diesel by effectively pricing their carbon content. However, the approach taken by each of these carbon pricing strategies is distinct, and the way they uniquely affect the price of petroleum products is likely unknown to most of the general public.

Motor fuel taxes can include federal, provincial, carbon, municipal, and GST/HST/QST. Most of these taxes are added as a fixed (cent per litre) charge, with the exception of GST/HST/QST, which is calculated on a percentage basis. Therefore, a carbon tax is applied like any other fixed-rate tax, adding a set amount to the pump price based on an established target carbon price.

Alberta introduced its carbon tax in January 2017 at 4.49 cents per litre (\$20 per tonne) for gasoline, increasing to 6.73 cents per litre (\$30 per tonne) in January 2018. British Columbia first set its carbon tax in July of 2008 at 2.41 cents per litre for gasoline, with stepped increases that currently sit at 7.78 cents per litre, and is set to rise to 11.12 cents per litre by April of 2021.

Figure 4: Average June 2018 Pump Price Components, Select Cities



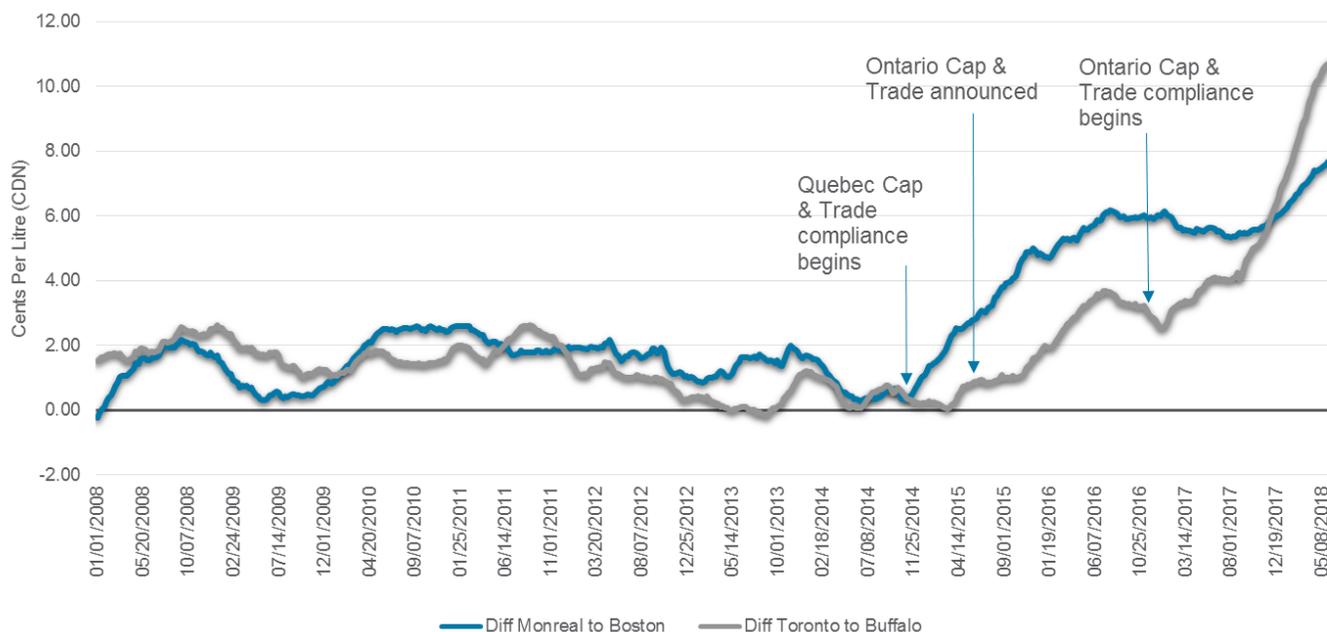
In contrast, a cap & trade program’s costs are borne by the producers of petroleum (refiners), and therefore has the effect of increasing the wholesale rack price. A cap & trade program sets a limit (or cap) on the amount of allowable carbon emissions within a defined market, and identified emitters buy and sell credits that act as the currency of compliance. The prices for these credits are determined at auctions and both the Ontario and Quebec credit markets were integrated into a joint market with California.

While it is established that cap & trade programs add to the wholesale rack price, its precise effect on that price is difficult to quantify because of how it is accounted for. Most emitters likely hold a portfolio of credits that can range in price and so compliance costs can differ by organization. Additionally, it is only an assumption that the full costs are passed through to the rack price – ultimately that rack price is determined in a competitive market.

Figure 4 illustrates the breakdown of the average June pump prices in select cities by their components showing the distinct points in the value-chain that carbon tax and cap & trade influence pricing. The cent per litre impact of cap and trade in **Figure 4** is estimated based on recently reported auction prices.

Quebec established their cap & trade program in late-2014 through a joint auction with California; their initial settlement price was 12.10 \$US/tonne. Ontario began their cap & trade program in January 2017 with a settlement price of 18.61 \$CAD/tonne and then linked into the Quebec/California program at the beginning of 2018. Recently, Ontario opted to cancel their cap & trade program and was subsequently removed from the joint Quebec/California credit market.

Figure 5: Canadian Gasoline Wholesale Price Differences to Respective U.S. Markets, 2008-2018



An illustration of the impact of cap & trade on wholesale pricing is depicted in **Figure 5**. Typically, wholesale prices are fairly uniform between proximate Canadian and U.S. markets on an exchange-adjusted basis. Differences between their wholesale prices are historically small, and are generally the result of temporary supply issues. **Figure 5** shows that when cap and trade programs were introduced in Ontario and Quebec, the wholesale gasoline price rose relative to their respective U.S. markets that operate without a carbon pricing system. The costs associated with these cap & trade programs inflated rack prices, and were passed along to consumers through that rise in the wholesale price.

The Canadian government has announced federal carbon pricing regulations, which will effectively act as a “backstop” or minimum allowable carbon price across the country. The federal program initially sets that minimum price at \$20 per tonne in 2019, and increases to \$50 a tonne by 2022. Provinces that already meet the federal minimum carbon price through existing programs will be exempt, while those that do not will be required to implement something or risk having a federally managed program imposed upon them. It is somewhat unclear how the government plans to enforce this program, and there are likely to be legal challenges between provinces that do not plan to implement a program, or those that are in the process of winding their program down, like Ontario. What is clear is that no matter how a program is set up, either as a carbon tax or cap & trade, the end result is higher pump prices for Canadian consumers.