



First Quarter 2018
January – March

Retail Gasoline and Diesel Prices in the First Quarter of 2018 were at their Highest Levels since the end of 2014.

Rising crude prices and strong seasonal refining margins pushed both gasoline and diesel prices higher than they had been in the last three years.

Increased demand for gasoline and diesel this past quarter led to lower fuel stocks compared to a year ago, particularly in the diesel market, driving up wholesale prices this past quarter. Crude prices rose over the past quarter, yet wholesale prices rose at a faster rate, following lower inventories, regional refinery issues and a depreciating Canadian dollar. Recent gasoline refining margins averaged 5.6 cents per litre higher than Q1 2017, and diesel refining margins similarly peaked in January at a three-year high.

Global crude prices rose this past quarter responding to an OPEC decision to extend crude production limits beyond the end of 2018. In addition, positive global economic indicators and signs of the global crude market coming into balance supported rising crude prices. Canadian heavy crude prices rose towards the end of the previous quarter slowing a widening price gap to other North American crude benchmarks. With the Keystone pipeline currently running at reduced pressure, Canadian producers have increasingly relied on rail; however, competition from other commodities and the expectation of long-term contracts from rail operators has limited spare capacity. These transportation bottlenecks had resulted in a deep discount for Canadian crudes. **Figures 1 & 2** show the historical movement of retail gasoline and diesel prices in Canada along with their component prices.

Both WTI and Brent crude prices increased this past quarter following strong refinery inputs and signs of balance in the global crude market. WTI rose 4.47 \$US/BBL, ending the quarter at 64.91 \$US/BBL, or 7.4 percent higher than the end of the previous quarter. Similarly, Brent rose 2.85 \$US/BBL, ending the quarter at 69.65 \$US/BBL, or 4.3 percent higher than the end of the previous quarter. The Brent crude benchmark climbed above the milestone of 70 \$US/BBL early in the quarter, its highest level since December 2014. Early in the new year, lower inventories at Cushing, Oklahoma, the pricing hub for WTI, caused the Brent premium to WTI to shrink to just 2.19 \$US/BBL. However, Brent prices rose toward the end of the quarter, and the premium ended the quarter at 4.74 \$US/BBL.

The price of Western Canadian Select (WCS) strengthened this past quarter, rising 26.3 percent. The WCS discount to WTI peaked in early February at 30.58 \$US/BBL, before shrinking to 21.91 \$US/BBL at the end of March. There are signs the Canadian crude glut may be easing

Figure 1: Canadian Average Regular Gasoline and Component Prices

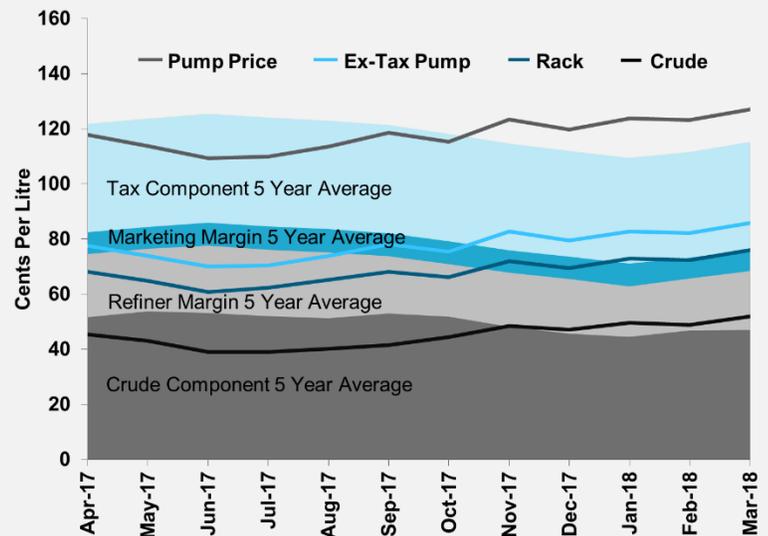
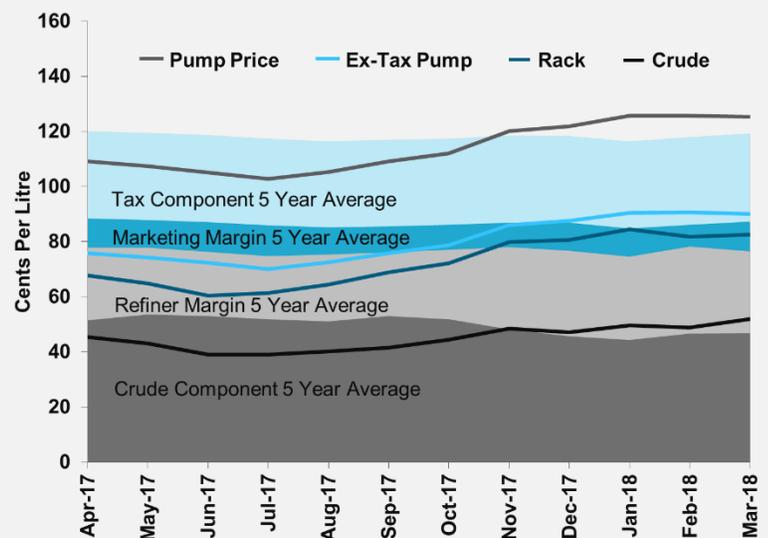


Figure 2: Canadian Average Diesel and Component Prices



slightly through the increased use of rail transport, including Canadian heavy crude shipped by rail to Portland, Oregon to ultimately be re-exported to China; a first of its kind.

Gasoline and Diesel Market Overview

Figure 3: Canadian Average Gasoline and Diesel Price Components for 1st Quarter 2018



Wholesale gasoline and diesel prices were elevated throughout the first quarter as refinery utilization rates rose steadily over that time. The increased refinery production was more than offset by higher demand and rising net exports, resulting in declining inventories and rising refined product prices.

The West Coast remains the most expensive region in Canada. The gap between West Coast wholesale gasoline prices and the average of the rest of Canada expanded from 11.3 cents per litre at the end the previous quarter to 19.3 cents per litre by the end of March. This has been driven higher by rising fuel taxes in the province, particularly in Vancouver, where retail prices sit well above the Canadian average.

After peaking in January, diesel refining margins fell over the remainder of the quarter, as demand tapered towards the end of the heating season. However, diesel refining margins remained nine cents per litre above this same time last year, largely due to increased demand and a sizeable decrease in North American distillate inventories.

Most Canadian regions saw comparable increases in wholesale prices rising in lockstep to rising wholesale prices, with the exception being western interior regions, where wholesale prices remained relatively flat over the quarter despite rising crude prices. (Figure 3)

Market Outlook for the Next Quarter

As we head into the second quarter of the year, there are a number of factors that will likely lead to rising gasoline prices. With demand in North America already outpacing demand from a year ago, we can anticipate further upward price movements in regional markets already constrained by seasonal refinery maintenance. Prices are likely to be pushed higher as refiners switch to more expensive summer fuel blends - decreasing their

butane content to reduce evaporative emissions. In 2018, the federal government mandated all provinces incorporate a carbon tax or cap-and-trade program with a minimum cost of \$10 per tonne on carbon dioxide emissions. Most are expected announce and implement programs in the near future.

Barring any substantial increases to crude prices, diesel prices will likely soften in the next quarter, driven lower by the normal seasonal decline in diesel refining margins.

High Vancouver Gasoline Prices Explained

Vancouver retail gasoline prices were 24.5 cents per litre above the Canadian average in March, after averaging over 20 cents per litre higher than the Canadian average throughout 2017. Vancouver has much higher rates of fuel tax than other jurisdictions in North America, reaching nearly 50 cents per litre last month, or roughly one-third of the average Vancouver pump price at that time. While some portion of Vancouver's elevated prices can be attributed to these higher fuel taxes (Figure 4), it is certainly not the only factor pushing up prices on the West Coast.

There is also considerable disparity between wholesale gasoline prices on the West Coast and the rest of western Canada, and further, there is currently a fundamental disconnect between these markets' price movements. In March 2018, wholesale gasoline prices in Vancouver averaged 14 cents per litre higher than the rest of Canada. Typically, when two markets are connected by supply infrastructure, as Vancouver and Edmonton are via the Trans Mountain pipeline, their wholesale refined product prices are relatively close and they tend to move similarly from day-to-day. This phenomenon was present between Vancouver and western Canada historically, but since late-2014, there was a distinct separation between the prices in these markets, causing the average price difference between them to expand (Figure 5).

Figure 4: Gasoline Component Prices, March 2018

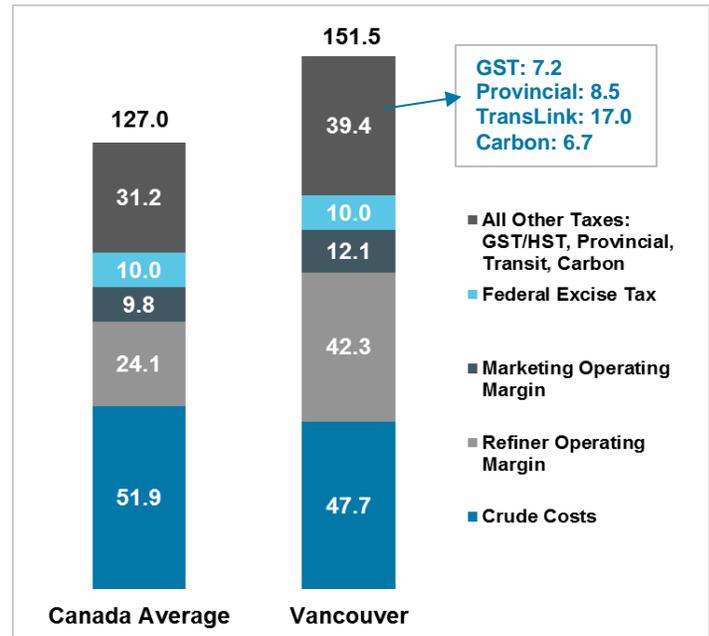
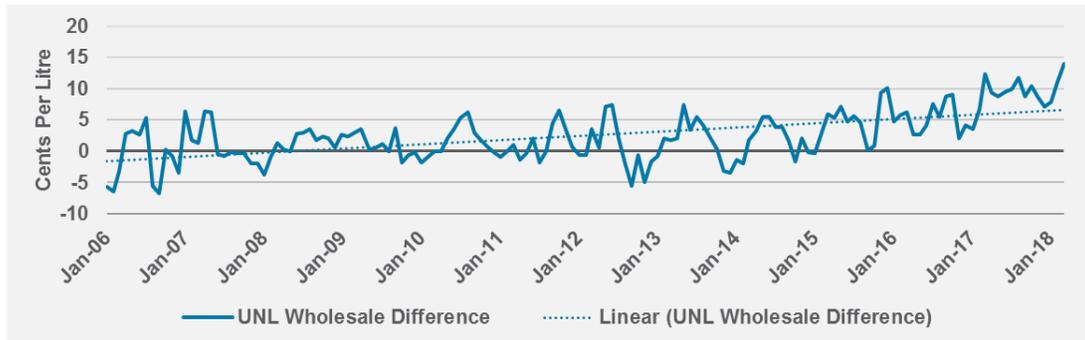


Figure 5: Gasoline Wholesale Price Difference to Canada Average, 2006-2018



Supply issues in a specific region can cause wholesale prices to rise temporarily, this helps to attract more product into the area where it's needed, but arbitrage opportunities often limit the size of price gaps, and return them to equilibrium fairly quickly. In order to sustain the type of long-term and substantial wholesale price differences observed between Vancouver and the rest of western Canada, there must be

larger systemic issues in the region. Given the complexities of refined product supply in British Columbia, it is worth exploring this as a contributing factor to Vancouver's high pump prices.

Less than 30 percent of British Columbia's refined product supply comes from the province's own refineries, while the bulk of their supply comes from Alberta, via the Trans Mountain line. Any imbalances between supply and demand are generally handled through import/export off the West Coast. If British Columbia is oversupplied for a particular product like gasoline, they can simply look to export off the West Coast, and if they are short product, they can import, primarily from the U.S. West Coast. Since 2014, demand for gasoline in BC, and in the Lower Mainland specifically, has risen considerably (Figure 7), and at almost the exact same time, demand for space to ship crude oil on the Trans Mountain pipeline had pushed it into a constant state of apportionment. Figure 6 shows that this pipeline has been consistently oversubscribed since late-2014, and this has had the effect of pushing down the volume of refined product transported in the line. This created a situation where rising regional demand had to be met through imports, causing the disconnect between prices on the West Coast and the rest of Western Canada.

The increased reliance on imported gasoline into Vancouver would also mean reliance on more expensive forms of transportation (rail and barge), and generally these imports are from the U.S. West Coast, a market that had elevated refined product prices relative to the rest of North America over the last few years.

The Vancouver region has had to compete with the U.S. West Coast (PADD 5) for gasoline imports. Since early 2015, there was a marked rise in gasoline imports into PADD 5, which coincides with the unexpected and prolonged closure of the the

Torrance Refinery in California. Although the refinery has been back online since May 2016, imports into PADD 5 have remained elevated compared to levels prior to 2015. Consequently, PADD 5 wholesale prices have been well above the rest of the U.S. since 2015, and has likely driven up the price that the Vancouver-area pays for imported products.

Figure 6: Trans Mountain Product Transports, 2006-2017

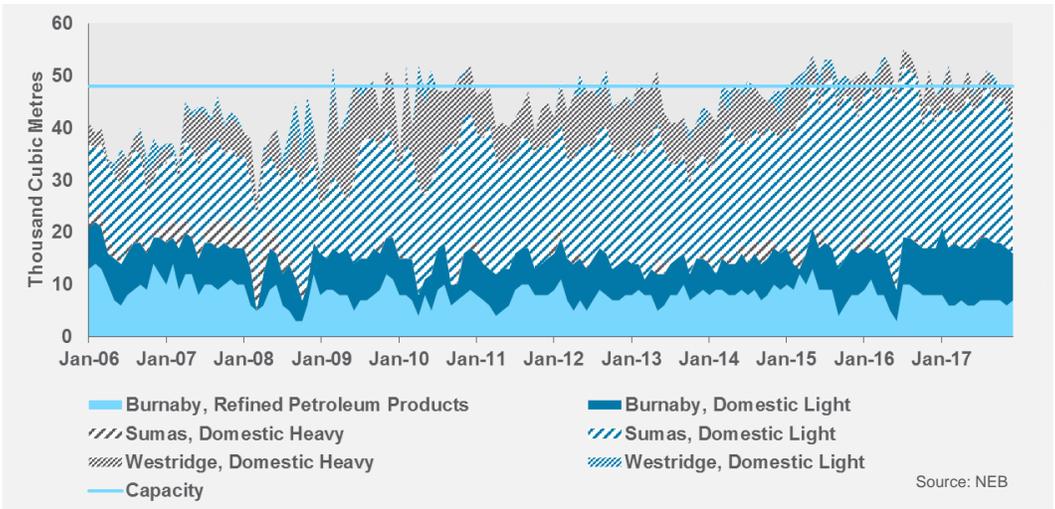
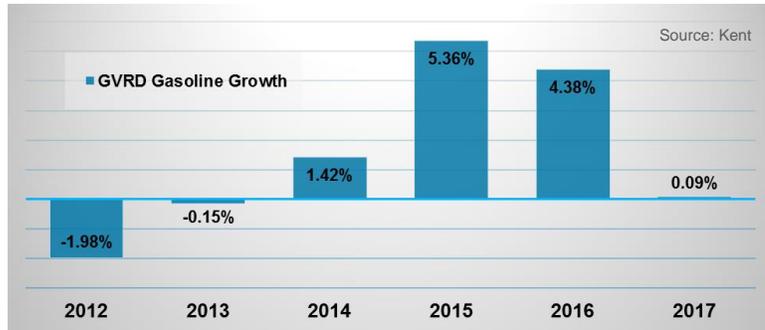


Figure 7: Gasoline Consumption Growth Rate in the Greater Vancouver Area, 2012-2017



shown in **Figure 7**, Vancouver’s consumption showed signs of weakening in 2017, and the current high price environment is likely to push this down even further. In the longer-term, most demand forecasts for transportation fuels show an expected decline in gasoline consumption, due to increased fuel economy in the vehicle fleet. If demand for gasoline were to generally weaken, Vancouver may be able to push out some of the higher priced imports and see some convergence in their wholesale pricing with the rest of Western Canada. However, differences in tax rates will persist (and are expected to grow) keeping Vancouver prices above the national average for the foreseeable future.

So what does the future hold for Vancouver’s gasoline prices? If the Trans Mountain pipeline expands capacity, there is the potential for a marginal increase in the amount of refined product transported into the region, which may reduce wholesale prices. However, the way this scenario could play out is less than clear, even under the assumption that the pipeline gets built. The increased capacity of the expanded line will be used to transport primarily crude and not necessarily refined product, since there are already committed shippers (of crude oil) for virtually all of the proposed expanded capacity.

In the coming years, relief for the disparity in West Coast wholesale prices is more likely to come from the demand side. As