



Third Quarter 2020
July – September

Canadian Retail Petroleum Prices Moved Higher in the Third Quarter, but Remain Below Previous Five-Year Averages

After reaching multi-year lows in the second quarter during peak COVID-19 shutdowns, retail prices rose in the third quarter as demand increased, and crude prices moved higher.

Demand for petroleum products began to recover in the third quarter as governments eased travel limitations, and businesses began to re-open following the general easing of COVID-19 restrictions. In response, refineries increased crude runs from extreme lows experienced in the previous quarter; however, refinery activity remained below levels typical for the peak summer driving season. Weakened crude prices from lower refinery activity were balanced with crude oil production quotas put in place by OPEC and a group of non-OPEC countries (OPEC+), as well as decreased North American crude production resulting from lower crude prices. This combination of factors led to lower crude price volatility and relatively stable retail prices over the past quarter.

Although gasoline demand in Canada had partly recovered from pre-pandemic shutdowns by July, demand remained below seasonal norms, down 13.7 percent below levels from a year ago in July and August (Statistics Canada). Even as gasoline demand showed signs of recovering in the third quarter, refining margins remained below their five-year average. Consequently, retail prices were down over sixteen cents per litre from a year ago.

Sustained by continued trucking demand and online shopping, diesel demand did not fall as sharply as other petroleum products during the onset of shutdowns from COVID-19. In response, refiners diverted jet fuel production to diesel fuel due to product similarities and sharply lower jet fuel demand. As distillate production outpaced consumption, inventories in North America and abroad rose to multi-year highs. Consequently, Canadian diesel refining margins averaged a seven-year low for the third quarter, and retail prices were over twenty cents per litre lower than a year ago. **Figures 1 & 2** show the historical movement of retail gasoline and diesel prices in Canada, along with their component prices.

Third-quarter crude prices rose modestly in August as crude oil production was affected by a series of hurricanes in the Gulf Coast before dropping in the first week of September as renewed concerns over economic recovery and a potential second wave of the COVID-19 pandemic emerged. Overall, however, third-quarter crude prices were marked by a period of stability as lower refinery demand was matched with lower crude oil production. The price of Brent crude (a global benchmark) climbed to as high as 45.94 \$US/BBL near the end of August, before dropping to 40.63 \$US/BBL at the end of September, just 2.0 percent below the end of the previous quarter. Similarly, the WTI benchmark experienced similar movement, climbing as high as 43.03 \$US/BBL by late August, before declining to 39.94 \$US/BBL at the end of September, 1.7%

Figure 1: Canadian Average Regular Gasoline and Component Prices

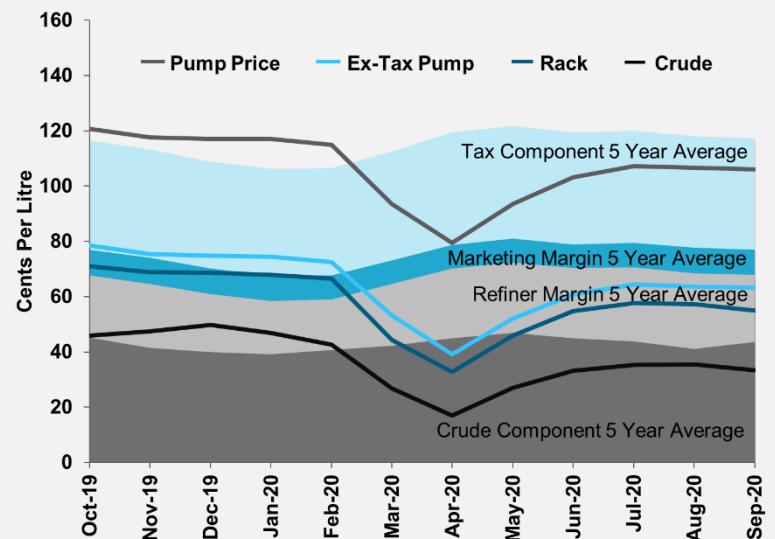
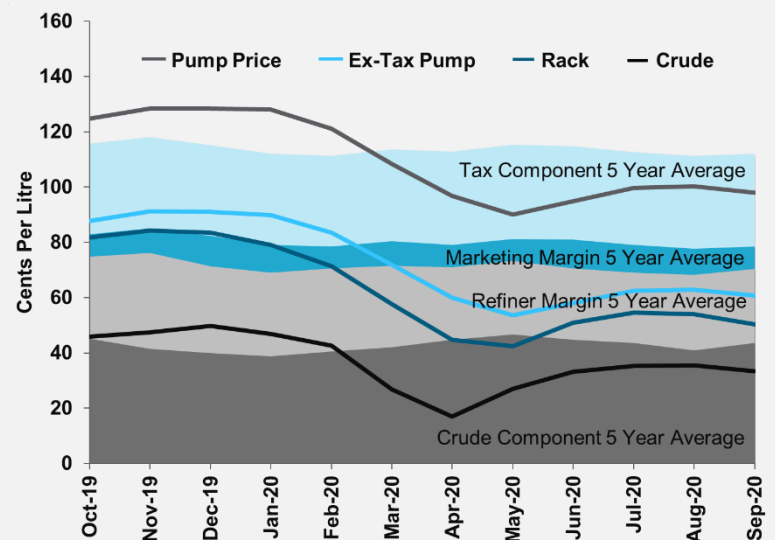


Figure 2: Canadian Average Diesel and Component Prices



above the previous quarter's finish. Brent's premium to WTI remained low over the quarter, averaging 2.30 \$US/BBL, and ended the quarter at 0.69 \$US/BBL. A low spread has likely developed as North American crude production dropped during the onset of the pandemic and remains low, compared with North Sea production, which has not declined in 2020.

The heavy/light crude oil price spread between WTI and Western Canadian Select (WCS) remained low in the third quarter. Lower Canadian crude production has led to fewer pipeline capacity constraints and less need to ship crude by rail. The heavy/light discount averaged 8.06 \$US/BBL in the third quarter, down from 8.84 \$US/BBL in the previous quarter, and 17.37 \$US/BBL in the first quarter.

Gasoline and Diesel Market Overview

Figure 3: Canadian Average Gasoline and Diesel Price Components for 3rd Quarter 2020



Gasoline refining margins expanded in the third quarter as demand picked up from extreme lows experienced in the previous quarter, pushing retail gasoline prices to a five-month high in July. However, demand remains well below seasonal norms, and consequently, Canadian retail prices this past summer were the lowest experienced since the summer of 2016.

The regional disparity between coastal gasoline prices contracted in the third quarter as West Coast rack prices declined while East Coast rack prices increased. However, the disparity still remains large as West Coast rack prices ended the quarter nearly eighteen cents per litre higher than the East Coast. The West Coast has limited alternate supply options due to geographical isolation from the rest of the country, while the North American eastern seaboard has alternative supply sources due to its proximity to tidewater and abundance of marine terminals.

North American distillate inventories have expanded to their highest level since 1982, as diesel fuel production has outpaced consumption. Consequently, Canadian diesel refining margins were at a seven-year low in the third quarter. Lower refining margins flowed through to lower retail diesel prices, which were at a four-year low this past quarter.

Regional diesel prices showed little deviation from the previous quarter, moving in line with crude price changes. Wholesale diesel prices remain consistently low along the East Coast. East Coast and Gulf Coast distillate inventories have expanded higher than other regions in North America and are likely contributing to lower diesel prices in Atlantic Canada. (Figure 3)

Next Quarter Market Outlook

The COVID-19 pandemic and the effects on transportation fuel demand, and the corresponding economic impact of shutdowns remain the dominant factor affecting fuel prices in the coming months. As we enter a second wave of the pandemic, uncertainty raises concerns over how much petroleum product demand will be affected, how consumption trends will affect the various refined petroleum products, and how long these effects will endure.

Gasoline demand will likely taper in the coming months as seasonal demand wains and COVID-19 restrictions increase with a second wave. As a result, retail gasoline prices will likely move lower and remain low over the winter months. As we head into the winter heating season, diesel demand will rise in the form of home heating fuel. However, high North American distillate inventories will likely mute upward price pressures on diesel that could arise from increased heating fuel demand. Additionally, diesel fuel demand is correlated with economic health. The effects of COVID-19 on gross domestic product have been profoundly negative in 2020, likely impacting diesel demand in the coming months.

Gasoline Price Factors: A Coastal Comparison

Retail gasoline prices vary across Canada due to several factors such as geography, infrastructure, and government policies. In Canada, there has been a distinct difference in gasoline prices between the east and west coasts over the last few years. Halifax’s retail gasoline prices have been consistently lower than prices in Vancouver during the past year, that gap averaging 33.5 cents per litre. (Figure 4) A similar phenomenon exists between most east and west coast markets. In the following analysis, we will examine the factors causing these differences.

Retail pump prices consist of four main components: taxes, retail/marketing margins, refining margins, and crude costs. In the Atlantic provinces, the fixed cent per litre taxes include provincial gasoline and carbon taxes (excluding Nova Scotia, which uses a cap and trade program to put a price on carbon), ranging from 15.1 cents per litre in Prince Edward Island to as high as 20.9 cents per litre in Newfoundland. In addition to provincial and carbon taxes, all Atlantic provinces pay 15 percent for the harmonized sales tax (HST). In British Columbia, gasoline taxes consist of provincial, carbon, and transit taxes, ranging from as high as 35.9 cents per litre in Vancouver to 28.9 cents per litre in Victoria and 23.4 cents per litre elsewhere in the province. In addition, the goods and services tax (GST) is paid on gasoline at a rate of 5 percent. In all provinces, federal excise taxes are added at 10.0 cents per litre for gasoline. In third-quarter 2020, Vancouver’s total gasoline tax component was 14.2 cents per litre more than Halifax. (Figure 5)

Figure 4: Vancouver, BC and Halifax, NS Retail Gasoline Prices: October 2019 – September 2020

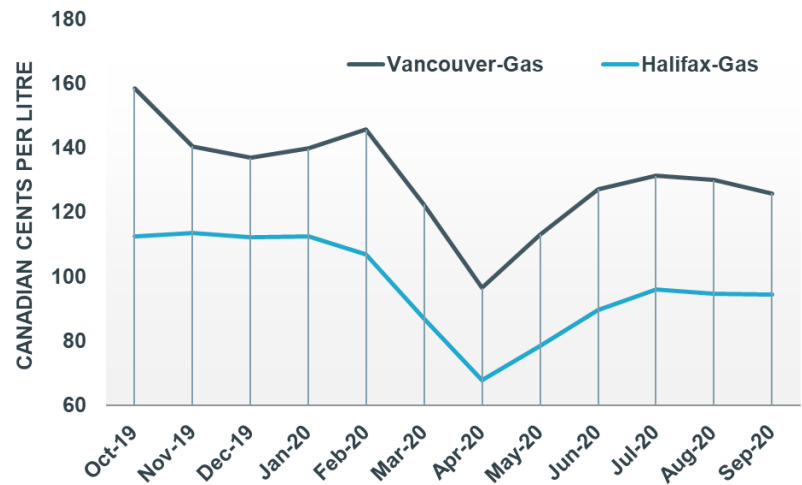
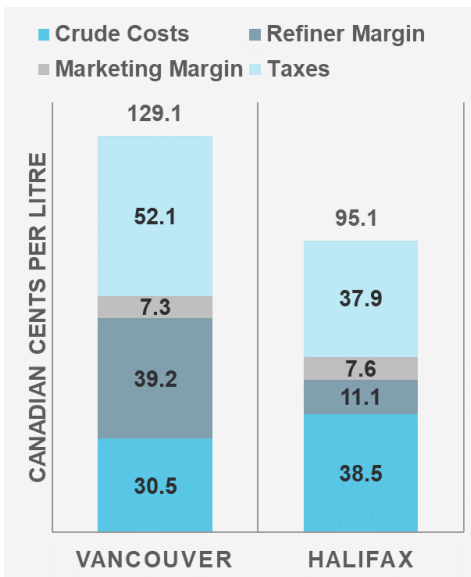


Figure 5: Gasoline Price Component Comparison, Q3 2020



Marketing (or retail) margins are calculated in this analysis as the difference between the extax pump price and the wholesale rack price (a proxy for a retail site’s acquisition cost of product). Marketing margins are gross product margins and cover all the costs involved in selling fuel, such as rent, wages, utilities, and delivery charges. In the third quarter, Halifax’s retail margin was 0.3 cents per litre higher than Vancouver’s. (Figure 5) The retail margin represents the smallest portion of the retail pump price.

Refining margins represent the cost to manufacture refined petroleum products from crude oil and other refinery inputs, and is calculated (in this analysis) as the difference between the crude oil acquisition cost and a refined petroleum products’ wholesale rack price. In the example illustrated in Figure 5, refining margins in the third quarter in Vancouver were 28.1 cents per litre higher than in Halifax, due to both higher wholesale prices and lower average crude input costs.

Generally, wholesale gasoline prices represent regionalized supply and demand conditions. Differing wholesale prices between regions are usually temporary, caused by refinery or pipeline issues, or other supply constraints that prevent the movement of product between high and low priced markets. When these temporary issues arise, alternate sources of refined products are often utilized until wholesale prices normalize. This is true for most of Canada as wholesale prices typically vary little from region to region. The exception to this over the last several years has been British Columbia.

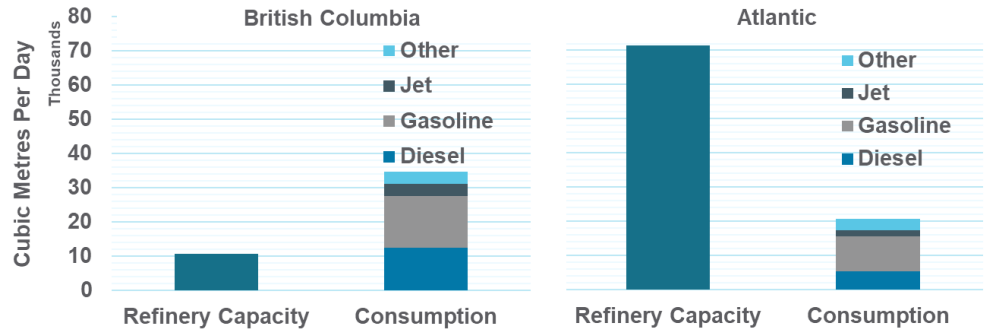
British Columbia’s wholesale gasoline prices, like the rest of the North American west coast, are consistently higher than the rest of North America. In 2019, British Columbia’s unleaded wholesale rack price averaged 15.8 percent higher than the Canadian average. Similarly, in the U.S., wholesale gasoline prices along the West Coast averaged 22.4 percent higher than the rest of the country (EIA). Logistical isolation

by way of the Rocky Mountains and limited pipeline capacity, as well as the costs associated with more stringent environmental standards (LCFS) in several West Coast states, as well as British Columbia, generally explain the wholesale price differences in that region.

As **Figure 6** shows, demand for refined products in British Columbia far outweighs refinery capacity to produce petroleum products. Thus, British Columbia is a net importer of refined products, relying mostly on refined products produced in Alberta, and imported along the Trans Mountain pipeline.

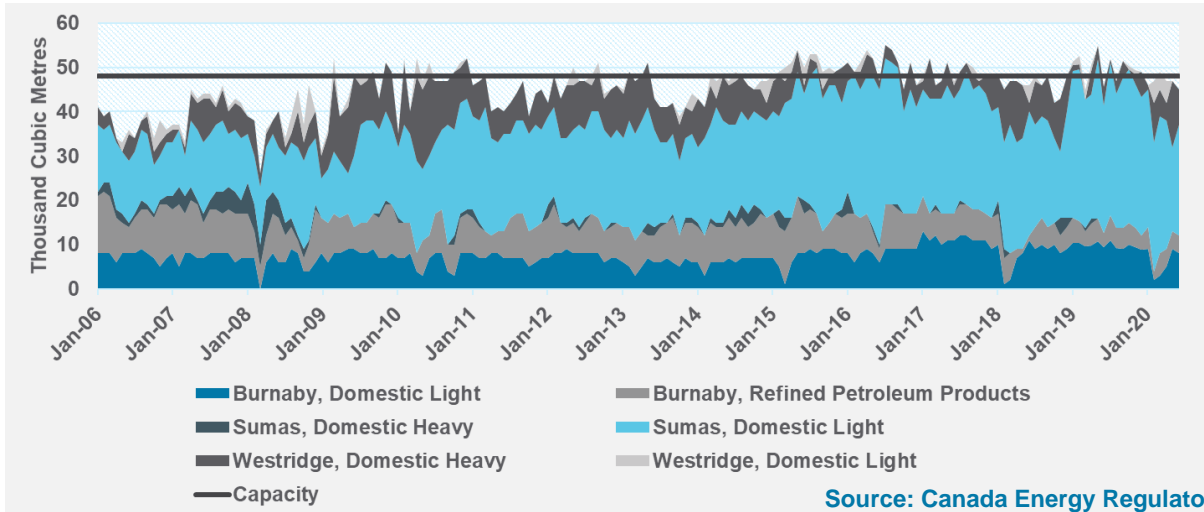
Figure 7 shows petroleum products transported along the Trans Mountain Pipeline often are at or near pipeline capacity. When supply issues occur, product must be imported through more expensive means, such as rail or transport trucks, and from higher-priced markets along the U.S. west coast, driving up wholesale prices. The U.S. West Coast refinery capacity closely matches consumption. Consequently, when there are supply disruptions, the entire West Coast competes for refined products, leaving prices prone to volatility.

Figure 6: Coastal Comparison: Refinery Capacity versus Product Demand (2018)



Source: Canadian Centre for Energy Information, Company Websites, Kent Report: Canada's Downstream Logistical Infrastructure

Figure 7: Trans Mountain Pipeline Flow, 2006-2020



Source: Canada Energy Regulator

In contrast, East Coast refinery capacity outweighs product demand. (**Figure 6**) Even with the 2020 North Atlantic refinery shuttered, the Atlantic region produces more than enough refined petroleum products to meet demand. Excess product in Atlantic Canada is exported to Ontario and Quebec, or south to the U.S. East Coast. In the event of unexpected supply issues, the East Coast also has access

to the heart of refining in the U.S., the Gulf Coast. A significant amount of refined product moves from the Gulf Coast further up the Atlantic coast by pipeline (Colonial Pipeline System) or by ship, making it readily available in that Atlantic wholesale market.

Lower crude costs in British Columbia also contribute to higher refining margins. As **Figure 4** illustrates, third-quarter Halifax crude prices were 8.0 cents per litre higher than Vancouver's. Although Newfoundland does produce crude oil, most is exported, thus requiring the region to rely more heavily on historically more expensive crude imports, 53.4 percent of all Canadian imports in 2019 (Canadian International Merchandise Trade Database). In contrast, British Columbia produces very little crude oil, relying almost solely on imports of lower cost crude oil from Alberta. While crude costs can affect refining margins, the effect of lower crude costs is often disassociated from wholesale prices due to wholesale market price parity within regional supply orbits.

West Coast gasoline prices are higher than East Coast prices, largely due to differences in taxes, and higher wholesale prices, due in part to logistical constraints, and more stringent (and costly) environmental regulations. The logistical constraints and LCFS costs that exist in British Columbia also exist along the U.S. West Coast, and so this is likely an issue that will not change materially in the near-to-medium term.