# Fuel Focus

*Volume 3, Issue 11*
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## National Overview

### Canadian Pump Prices Decline by 1.5 cents per Litre from Last Week's Record High

Canadian retail gasoline prices declined 1.5 cents per litre to $1.31 per litre for the week ending June 3rd, compared to a record high of $1.33 per litre the previous week. Pump prices are now 23 cents per litre higher, compared to the same period last year.

Despite this week's decline, overall gasoline pump prices continue to be buoyed by underlying pressures from higher wholesale gasoline prices and record world crude oil prices, reaching US$132 recently on the New York Mercantile Exchange. Continued geopolitical risks to supply and low spare producing capacity maintain upward pressure on world crude oil prices.

Diesel fuel prices decreased 2 cents per litre to $1.43 per litre the week of June 3rd. However, this represents an increase of 46 cents per litre compared to the same period last year.

## *Recent Developments*

- **P.E.I. Propane Tax Eliminated:** On May 22, 2008, the Prince Edward Island Government announced that all propane purchases will be excluded from tax, including those for the operation of internal combustion engines. http://www.gov.pe.ca/photos/original/pt_gtn185.pdf
- **Inflation Up 1.7%**: Consumer prices rose between April 2007 and April 2008 and gasoline was the main contributor as pump prices increased 12% in the year. Prices for fuel oil and other fuels jumped 37% in April, the fastest increase since September 2005, exerting strong upward pressure on consumer prices, especially in the Atlantic provinces. (Statistics Canada, The Daily, May 21, 2008).
- **U.S. Crude Oil Use Drop to Lowest Level in Five Years**: Oil demand in March was 620,000 barrels per day, down from 797,000 barrels per day a year earlier, putting petroleum consumption at the lowest level for any month of March in five years. The lower oil demand reflects record fuel prices and a weak U.S. economy that reduced petroleum use. (Nickels Daily Oil Bulletin, May 29, 2008)
- **Irving Oil to Conduct Tidal Power Research**: On May 23, 2008, Irving Oil announced that it has received approval to explore the feasibility of tidal power development within the Bay of Fundy. This project, in partnership with St. Andrews Huntsman Marine Science Centre, is in response to the Saint John community request that Irving explore renewable forms of energy as part of the proposed new Eider Rock petroleum refinery.

**Figure 1: Crude Oil and Regular Gasoline Price Comparison (National Average)**

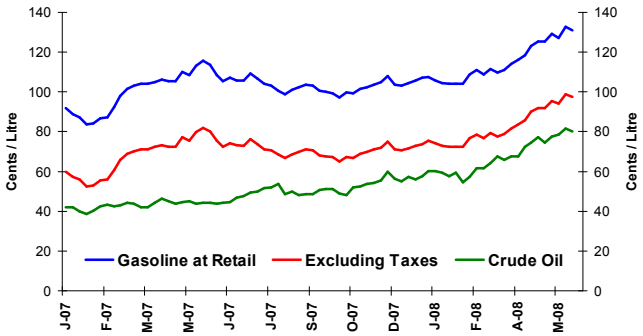
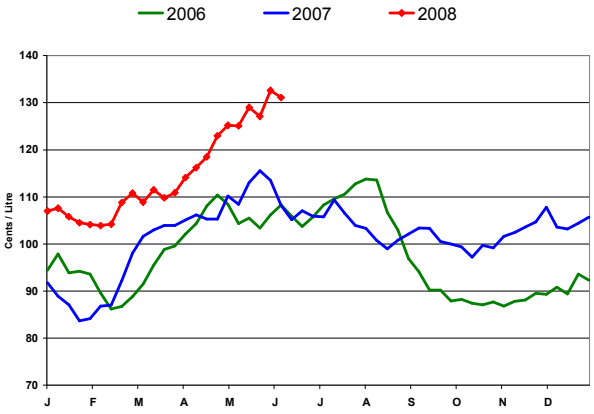



**Figure 2: Weekly Regular Gasoline Prices**




**Changes in Fuel Prices**

| | Week of: | Change from: | |
|---|---|---|---|
| ¢/L | 2008-06-03 | Previous Week | Last Year |
| Gasoline | 131.1 | -1.5 | +22.9 |
| Diesel | 143.2 | -1.8 | +46.1 |
| Furnace Oil | 134.9 | +0.3 | +51.0 |

*Source: NRCan*

## In this Issue



**Supplement**: Why summer gasoline costs more?

# Retail Gasoline Overview

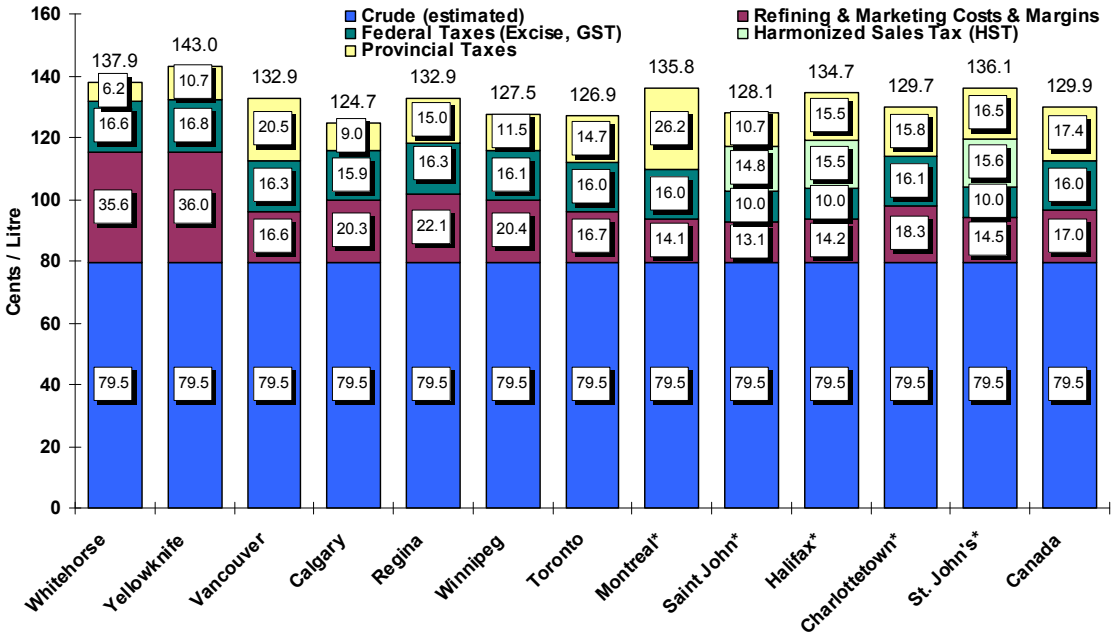
Canadian pump prices in selected cities for the **four-week average** ending June 3rd was $1.30 per litre, an increase of 3 cents per litre from the last report on May 23, 2008. This represents a 17 cents per litre increase compared to the same period in 2007.

The **four-week average** crude oil price component increased by 3 cents per litre to 80 cents per litre compared to two weeks ago. In contrast to the increase in gasoline prices shown above, crude oil prices have nearly doubled - up 35 cents per litre from last year at this time.

Retail gasoline prices in most Western centres increased about 3 cents per litre when compared to the previous report, ranging from $1.25 to $1.33 per litre. Price increases in Eastern cities rose also by 3 cents per litre, but ranged from $1.27 to $1.36 cents per litre.

Refining and marketing costs and margins rose by less than 1 cent per litre from the last report. However, this represents a large decline of 18 cents per litre compared to last year at the same period, despite markedly higher pump prices this year.

**Figure 3: Regular Gasoline Pump Prices in Selected Cities**
**4-Week Average (May 13 to June 3, 2008)**




*Source: NRCan*

** Regulated Markets*

## Increase Sales in Fuel Efficient Vehicles

According to Desrosiers Automotive Reports, Canadian sales of small fuel efficient vehicles are up 17% for the year to date while sales of less fuel efficient mid sized-vehicles were down 2.3% for the year to date. Indeed, on a year to date basis, large/luxury/sport cars are down 4.4%, while sales of pick up trucks and large vans declined 4% and 11%, respectively. Leading the sales in passenger cars are compact or subcompact vehicles and two of the smallest light trucks, the Honda CRV and the Toyota RAV4 (up 22% and 31%, respectively). Sales of the Honda Civic and Toyota Corolla were up 48% and 40% respectively, taking a larger market share over North American brands.

While sales of larger vehicles in Canada are down, the latest U.S. traffic volume report, released on May 23, 2008, indicates a 4.3% decline in vehicle miles traveled in March 2008 compared to the previous March. The 11 billion miles reduction represents the sharpest yearly drop for any month since the beginning of the Federal Highway Administration data collection history in 1942. Additionally, the report estimates that, as a result, greenhouse gas emissions fell by 9 million metric tons for the first quarter of 2008.

Source: Desrosiers Automotive Report, Market Snapshot, www.desrosiers.ca; U.S. Department of Transportation – Federal Highway Administration, http://www.fhwa.dot.gov/pressroom/fhwa0811.htm

# Wholesale Gasoline Prices

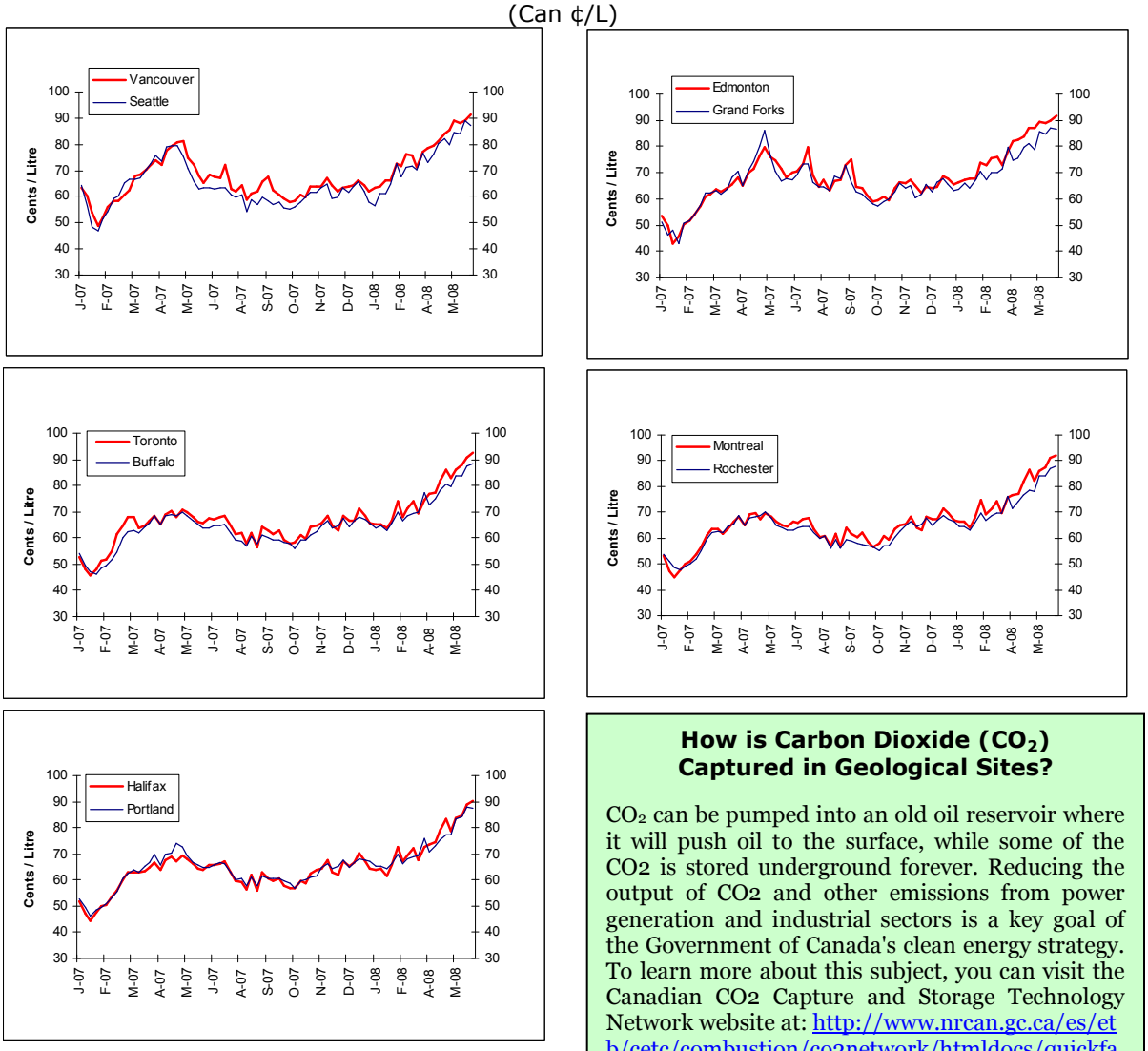
Wholesale gasoline prices increased in most selected centres for the **week of May 29th**, compared to the previous week. Overall, price increases ranged between 1 to 2 cents per litre. However, in the last four weeks prices have jumped significantly by 4 to 11 cents per litre.

Prices in Eastern markets in both Canada and the United States fluctuated in the range of less than 1 cent per litre to 2 cents per litre, compared to the previous week, ending the period in the 87 to 93 cents per litre range.

Wholesale gasoline prices in Western centres fluctuated similarly from a decline of 2 cents per litre to an increase of 2 cents per litre ending in the range of 87 to 92 cents per litre. Prices remained relatively higher in Canadian Western centres, compared to their American counterparts, partly due to the physical characteristics of petroleum product distribution networks for Edmonton and British Columbia which tend to limit options for alternate supplies.

Overall, prices in most selected centres are 16 to 26 cents per litre above last year's level.

**Figure 4: Wholesale Gasoline Prices**
Rack Terminals Prices for Selected Canadian and American Cities ending May 29, 2008
(Can ¢/L)




*Sources: NRCan, Bloomberg Oil Buyers Guide*

## How is Carbon Dioxide ($CO_2$) Captured in Geological Sites?

$CO_2$ can be pumped into an old oil reservoir where it will push oil to the surface, while some of the CO2 is stored underground forever. Reducing the output of CO2 and other emissions from power generation and industrial sectors is a key goal of the Government of Canada's clean energy strategy. To learn more about this subject, you can visit the Canadian CO2 Capture and Storage Technology Network website at: http://www.nrcan.gc.ca/es/etb/cetc/combustion/co2network/htmldocs/quickfacts_e.html

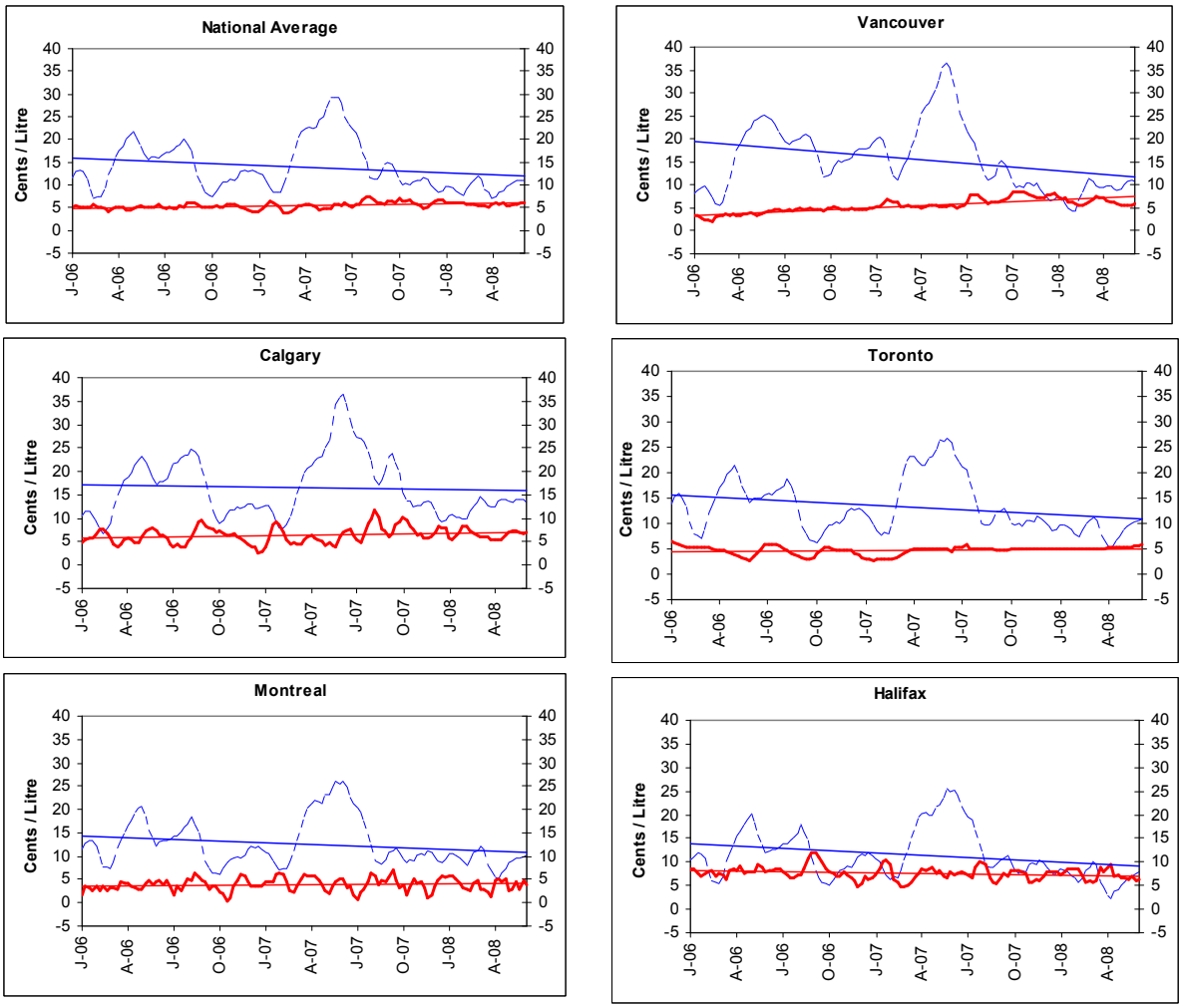
# Refining and Marketing Margins

**Four-week rolling averages** are used to illustrate the refining and marketing margins for gasoline in Figure 5, for the period ending June 3, 2008.

Overall, refining margins have averaged around 10 cents per litre since August 2007. During that period, Western markets ranged between 10 and 14 cents per litre, while Eastern markets hovered in the 8 to 10 cents per litre. This contrasts to last spring and summer when numerous North American refineries had planned and unplanned outages, causing a tightening in supplies and which contributed to the peak refining margins of 29 cents per litre in May 2007.

The moderate fluctuation in refining margins observed over the last 10 months reflects the fact that, despite the record rise in crude oil prices, wholesale gasoline prices have not increased at the same rate. Overall, the rise in gasoline prices at the retail level was tempered by moderate increases in refining margins. This demonstrates the significant impact that temporary tightening of supply can impose on gasoline prices compared to the impact of the current rise in world crude oil prices.

**Figure 5: Refining and Marketing Margins**
Four-Week Rolling Average Ending June 3, 2008
------- Refining Margin ——— Marketing Margin




*Source: NRCan*

# Crude Oil Overview

## Crude Prices Cool

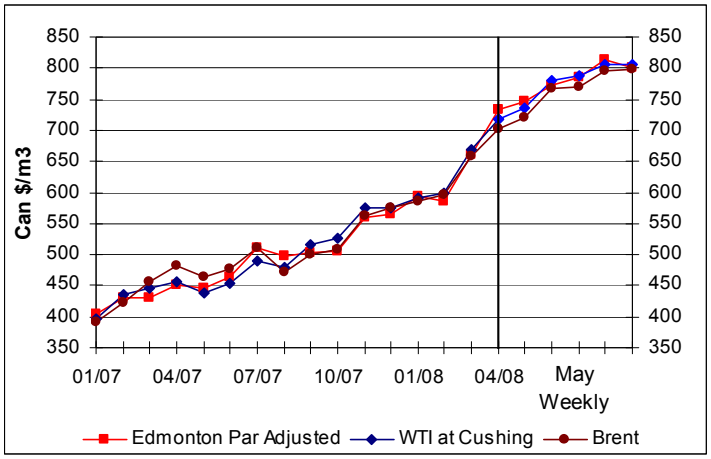
For the week ending May 30th, 2008, crude oil prices averaged between $799 and $805/m³ ($US128 to $US129 per barrel). Week-over-week Edmonton Par and WTI saw a decrease of $2 and $13/m³ respectively ($US0.60 to $US2 per barrel) while Brent saw an increase of $3/m³ ($US0.3 per barrel).

Although crude oil prices reached another record high in May, there are indications according to our recent data, that world crude oil prices has finally started to soften - at least temporarily.

In contrast to previous years, speculators are now starting to take the blame for the extraordinary leap in the price of crude oil instead of oil companies. In a recent U.S. Senate hearing, Senators blamed speculators of "reaping speculative profits" and indicated that "index speculators' trading strategies amount to virtual hoarding via the commodities futures markets". Many analysts believe that weak regulation of the futures markets has, in part, led commodities to be priced much higher than fundamentals would suggest.

Indonesia's apparent change to net importer status due to decreasing production has led to the decision to pull out of OPEC at the end of 2008 - this will have a small affect on OPEC's total production capacity (about 850,000 barrels per day) which will be more than made up for with the addition of Ecuador and Angola as new member countries.

**Figure 6: Crude Oil Price Comparisons**




**Changes in Crude Oil Prices**

| Crude Oil Types | Week ending: 2008-05-30 | | Change from: | | | |
|---|---|---|---|---|---|---|
| | | | Previous Week | | Last Year | |
| | $Can/ m³ | $US/ bbl | $Can/ m³ | $US/ bbl | $Can/ m³ | $US/ bbl |
| Edmonton Par | 800.23 | 128.36 | -13.05 | -2.29 | +362.96 | +63.48 |
| WTI | 804.77 | 129.09 | -2.41 | -0.58 | +372.77 | +64.99 |
| Brent | 799.46 | 128.24 | +3.37 | +0.34 | +334.60 | +59.27 |

*Source: NRCan*

### Canadian Oil Production and Reserves Replacement

In 2007, Canadian production of crude oil and equivalent averaged 441 128 m3/d (2.8 MMb/d), an increase of 7% from 2006 levels. This increase stems primarily from Western Canada where crude oil and equivalent supply increased by 4% because of the rise in production from the oil sands. As well, Canada's East Coast offshore production increased by 16% to 58 579 m3/d (369 Mb/d) in 2007, reflecting an improvement in operational performance at the Terra Nova and White Rose fields compared with the previous year.

Conventional light crude oil production declined by 3% reflecting the continuing decline of mature light oil reservoirs in the Western Canada Sedimentary Basin (WCSB). This decline was significantly less than the long-term trend of 5%, because strong crude oil prices resulted in increased oil drilling, thereby slowing the rate of decline in the WCSB.

Despite the fact that remaining conventional established reserves are reduced by production each year, new discoveries, extensions to existing pools and revisions to reserve estimates in existing pools offset declines to reserve estimates. From 2002 to 2006, cumulative additions of conventional light and heavy crude oil to established reserves replaced 92% of production.

Source: National Energy Board, *Canadian Energy Overview 2007 - May 2008.*

## What is Summer Grade Gasoline?

The arrival of spring signals blooming gardens and not-so-distant summer holidays which may lead to driving into the great outdoors. Spring and summer are historically the time for rising gasoline prices. However, another important, but less well known, reason is that it is also the time when more expensive-to-produce summer-grade gasoline is required.

Refiners blend gasoline differently, depending on the time of year and the desired characteristics they want to achieve. In the winter they are concerned about performance in cold temperatures and issues such as gas line condensation and potential freezing. In the summer, vapor pressure becomes the primary concern.

The maximum allowable vapor pressure, which is measured as Reid vapor pressure (RVP), is the primary distinction between winter and summer grade gasolines. When the weather turns warm, a high vapor pressure increases the evaporation of the gasoline into the atmosphere. The volatile organic compounds that are released from gasoline into the air not only contribute directly to health problems, but also indirectly, through the formation of ground-level ozone and smog. Motor gasoline vapor pressure, which may be as high as 15 RVP during the winter in some areas, is held to a level below 7 RVP in many areas during the summer.

Gasoline vapor pressure is also important for an efficiently operating automobile engine. Vapor pressure must be high enough to ensure the ease of starting an engine, but it must not be so high as to lead to vapor lock, which occurs when the gasoline in the engine's fuel delivery system turns from liquid to vapor, thereby, stalling the engine.

Gasoline with lower vapor pressure is generally more expensive to produce. For example, one method refiners use to reduce vapor pressure is to reduce the volume of normal butane, a liquefied petroleum gas with high vapor pressure, that is blended into gasoline. Removing low-cost high-vapor pressure components from gasoline increases the average cost of gasoline.

Blending ethanol into gasoline can also affect the RVP of the end product. That is why refiners must manufacture a specific blending component that, once combined with ethanol, will meet the more stringent summer RVP regulations.

These increased manufacturing costs are one of the reasons that gasoline prices tend to be higher in the summer.