Fuel Focus

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National Overview

Canadian Retail Gasoline Prices Rise Nearly 2 Cents per Litre From Last Week

The average Canadian retail gasoline price increased to 107 cents per litre for the week ending June 19th, up nearly 2 cents per litre from last week. This represents an increase of 3 cents per litre from the same period last year.

Retail gasoline prices moved upward again mainly due to the tight gasoline inventory levels observed in the U.S. since early spring. While U.S. gasoline inventories have gradually built-up, refinery maintenance operations have slowed supply growth and demand continues to grow. According to the latest U.S. Energy Information Administration Short-Term Energy Outlook, gasoline inventories are expected to be tight in the U.S. throughout the summer driving season, which is likely to keep upward pressure on gasoline prices.

Diesel fuel prices declined 1 cent per litre from last week and are nearly 7 cents per litre lower than at this time last year. Furnace oil prices declined 1 cent per litre to 83 cents per litre and are approximately 4 cents per litre lower than a year ago.

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

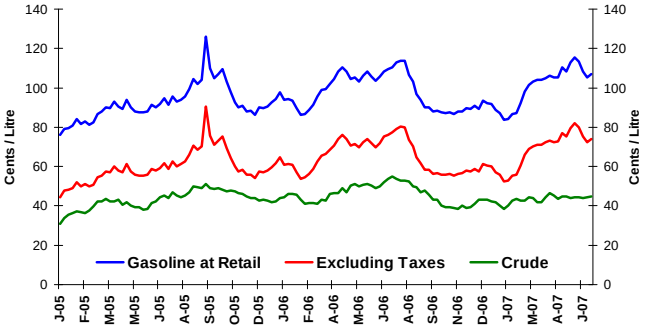
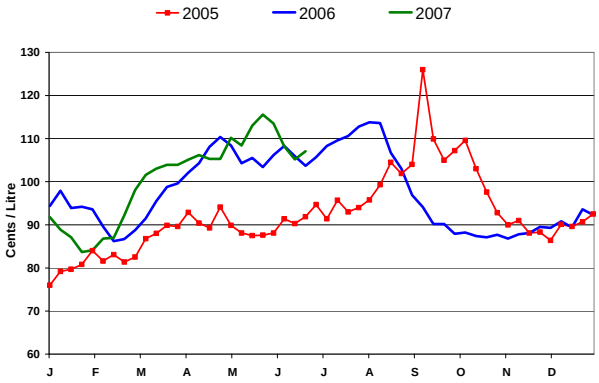


Figure 2: Weekly Regular Gasoline Prices



Recent Developments

- **Gasoline Consumption:** Canadians consumed 13 billion litres of gasoline in the first four months of 2007 - 2% more than the same period last year. In that same period, diesel fuel sales increased 7% to 8.7 billion litres while furnace oil rose nearly 12% to 2.2 billion litres. (Statistics Canada, The Daily, June 8, 2007)
- **Canada's First Fossil Fuel Tax:** The Government of Quebec announced a 0.8 cent per litre carbon tax on gasoline effective October 1, 2007, to finance its plan to reduce greenhouse gas emissions and favour public transit. In addition, oil companies will be required to provide written explanations to the Régie de l'énergie for increases in gasoline prices in the province. Furthermore, gasoline stations will have to post the minimum gasoline price set by the provincial energy board alongside the retail price. For more information visit the following website at: http://www.mrnf.gouv.qc.ca/presse/communiques-detail.jsp?id=6230
- **Competition Bureau:** Since 1991 the Bureau http://www.competitionbureau.gc.ca/internet/index.cfm?lg=e has conducted six separate investigations with respect to retail gasoline price increases and found no evidence to suggest that the rise gasoline prices resulted from a conspiracy to fix prices.

Changes in Fuel Prices

	Week of:	Change from:	
¢/L	2007-06-19	Previous Week	Last Year
Gasoline	107.1	+1.9	+3.4
Diesel	95.9	-1.3	-6.9
Furnace Oil	82.8	-0.6	-3.7

Source: NRCan

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Fuel Focus Supplement:

Refinery maintenance operations. What does it mean for refined product supply?

Retail Gasoline Overview

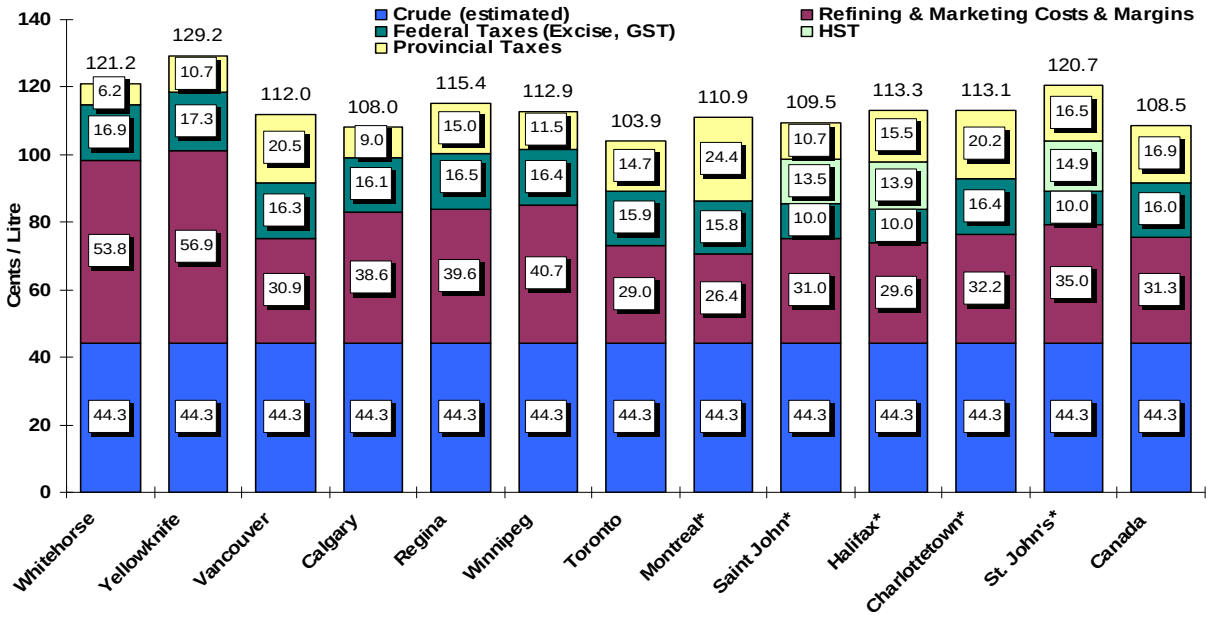
The average Canadian pump price in selected cities for the four weeks ending June 19th was nearly 109 cents per litre, a decline of almost 4 cents per litre from the last report on June 8, 2007. This represents a 2.5 cents per litre increase compared to the same period in 2006.

The four-week average crude oil price was 44 cents per litre, almost unchanged from the last report. Crude oil prices are also 5 cents per litre lower than the same period last year.

Retail gasoline prices, when compared to those in the last report, declined in all the centres, except for Whitehorse and Yellowknife, in the range of less than 1 cent per litre in St. John's to more than 8 cents per litre in Vancouver.

Overall, the Western cities (Vancouver to Winnipeg) showed the greatest decline of nearly 5 cents per litre, while Eastern cities (Toronto to St. John's) declined on average about 3 cents per litre. Refining and marketing costs and margins also declined in the range of 1 to 8 cents per litre, except in the Territories, with the largest decline occurring in Vancouver.

Figure 3: Regular Gasoline Pump Prices in Selected Cities
4-Week Average (May 28 to June 19, 2007)



Source: NRCan

** Regulated Markets*

How Does Your Service Station Obtain Gasoline?

Retail gasoline prices reflect wholesale prices. However, how and when retailers purchase wholesale gasoline can differ significantly, leading to varying prices and/or margins on the gasoline they sell. Retailers obtain gasoline supplies based on the nature of their relationship with their suppliers, and because there are several ways that retailers can purchase gasoline, the cost structure and availability of gasoline may vary greatly from one retailer to another, even those operating under the same gasoline brand.

A company's supply contracts and size determine its options for obtaining gasoline. Branded independent retailers have one option for gasoline – the refiner that provides it with supply. Some larger independent retailers also may have contracts with a specific refiner, or even multiple refiners. Most retailers are small businesses that obtain their gasoline at a terminal, also know as "the rack". Prices at the rack typically experience the most price volatility. Delivery fees are added to bring the purchased gasoline from the rack to the service station. Some large retailers may purchase gasoline "futures", attempting to lock in specific prices for delivery on a specific date in the future. This is known as "hedging" and helps retailers manage their costs in anticipation of volatile wholesale prices.

Source: Excerpts from the National Association of Convenience Stores 2007 Gas Price Kit.

Wholesale Gasoline Prices

Wholesale gasoline prices declined in most selected centres for the week of June 14th, compared to the previous week. Overall, price declines ranged from less than 1 to nearly 3 cents per litre among the Canadian and American centres with the exception of Grand-Forks and Seattle which increased slightly.

In the last two weeks prices decreased 2 to 7 cents per litre in all centres. The overall decline in gasoline prices reflects lower crude oil prices, a greater availability of supply and the slow build in U.S. inventories.

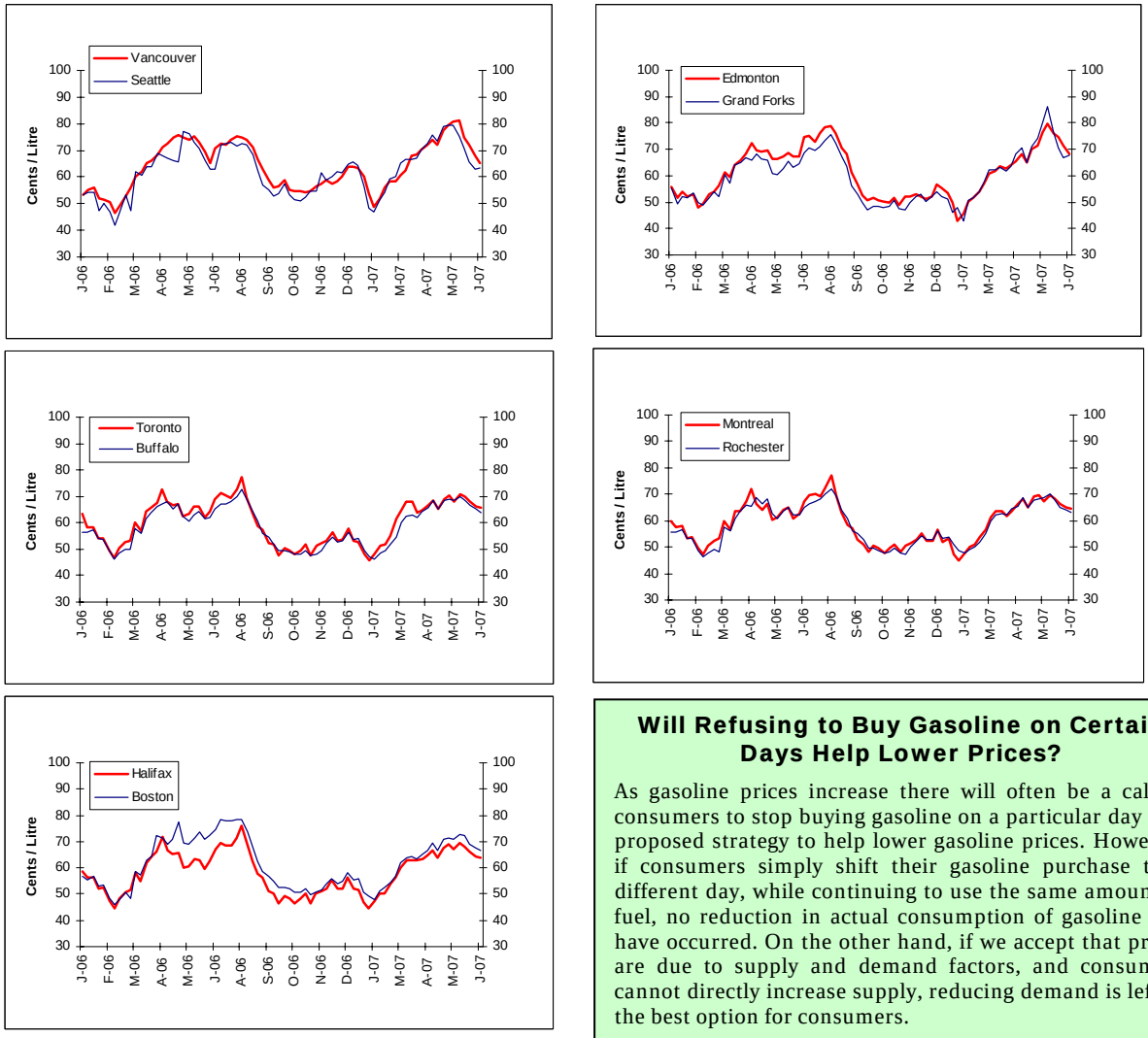
Wholesale gasoline prices dropped significantly in the last four weeks in both Canada and the United States.

Eastern markets in both countries registered price declines in the range of 5 to 7 cents per litre ending the period in the 63 to 66 cents per litre range.

Meanwhile western markets mirrored this trend, except more dramatically. Prices in these centres dropped in the range of 12 to 18 cents per litre in the last month and are more in line with the eastern markets. Overall, prices hovered around last year's levels, while in Boston, Vancouver and Seattle prices are between 3 to 5 cents per litre lower than they were during the same period last year.

Figure 4: Wholesale Gasoline Prices

Rack Terminals Prices for Selected Canadian and American Cities on June 14, 2007 (Can ¢/L)



Sources: NRCan, Bloomberg

Will Refusing to Buy Gasoline on Certain Days Help Lower Prices?

As gasoline prices increase there will often be a call to consumers to stop buying gasoline on a particular day as a proposed strategy to help lower gasoline prices. However, if consumers simply shift their gasoline purchase to a different day, while continuing to use the same amount of fuel, no reduction in actual consumption of gasoline will have occurred. On the other hand, if we accept that prices are due to supply and demand factors, and consumers cannot directly increase supply, reducing demand is left as the best option for consumers.

Source: EIA, This Week in Petroleum, May 16, 2007

Refining and Marketing Margins

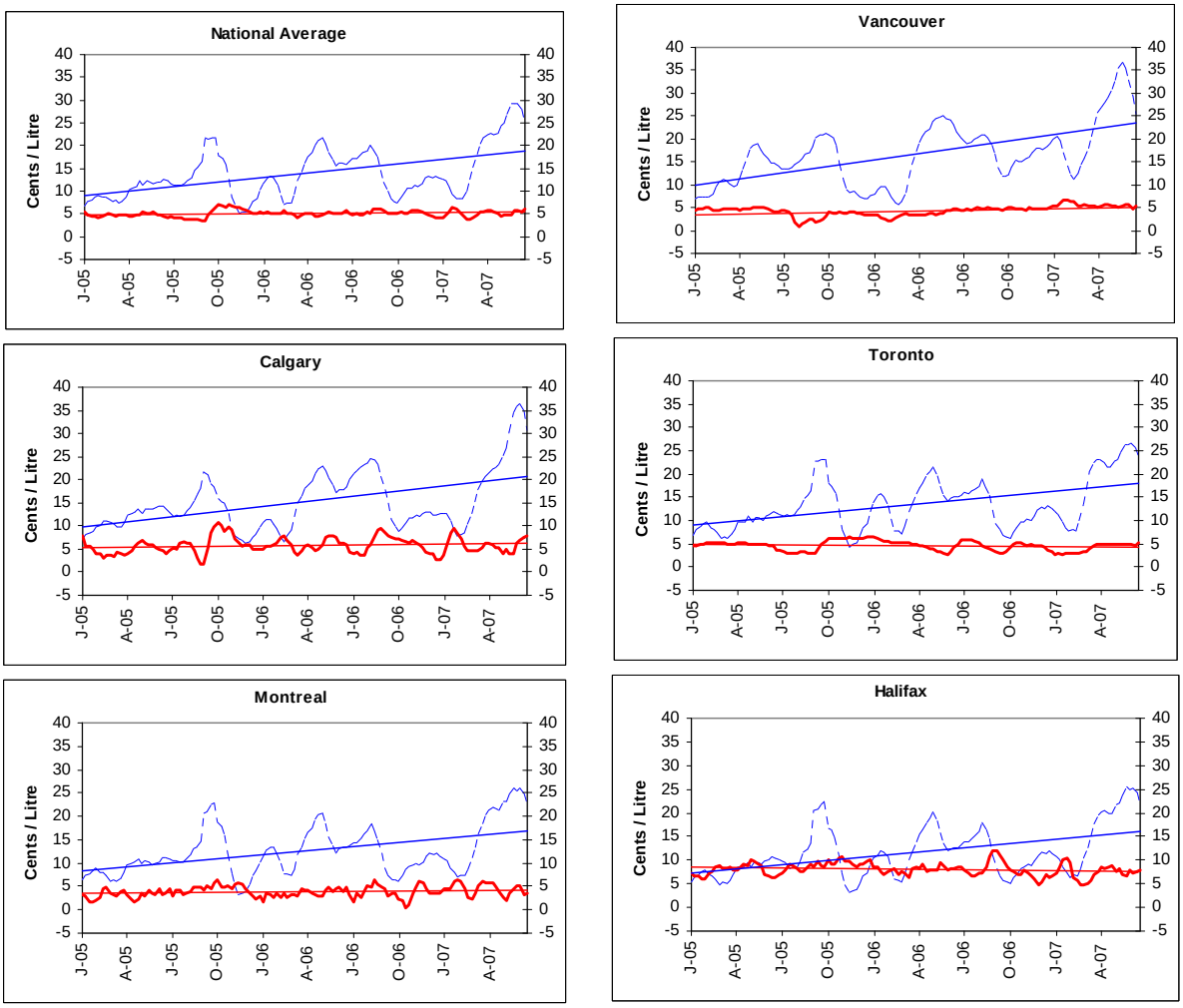
Four-week rolling averages are used for the refining and marketing margins for gasoline shown in Figure 5 for the period ending June 19, 2007.

Refining margins have been increasing steadily in the last five months. This is a reflection of the supply constraints in gasoline production, and a draw down of gasoline inventories throughout North America when demand continued to rise with the beginning of the summer driving season. These factors tend to push wholesale gasoline prices up as markets try to rebalance, which in turn increases refining margins. However, recently refining margins have started to show signs of a decline in response to the downward pressure on wholesale gasoline prices and relatively stable crude oil prices.

Overall, marketing margins remain much less volatile than refining margins and fluctuate over a much narrower range. This margin has fluctuated around 5 cents per litre over the last three years. Although this margin represents the smallest component of the retail price, it is expected to cover all the costs associated with the operating a service station.

Some of the costs associated with retailing gasoline are related to the volume of gasoline sold while other costs are fixed regardless. This gives large urban retail outlets a definite advantage. With a large throughput capacity per outlet, they can sell high volumes of gasoline at very low profit margins in an attempt to draw customers to their other product offerings. In contrast, smaller outlets will need a higher margin to cover their retailing costs.

Figure 5: Refining and Marketing Margins
Four-Week Rolling Average Ending June 19, 2007
------- Refining Margin ——— Marketing Margin



Source: NRCan

Crude Oil Overview

Moderate Fluctuations in World Crude Oil Prices

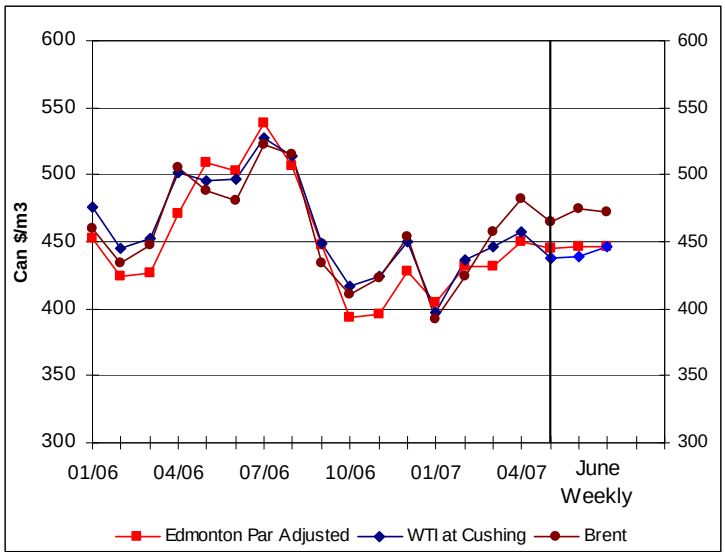
Crude oil prices ended the week of June 15th in the $446 to $472/m3 range ($US 67 to $US 70/bbl). While the price for the West Texas Intermediate (WTI) benchmark crude increased by about a dollar a barrel over the previous week, Brent decreased by the same amount. This could be an indication that the market is starting to rebalance itself.

Recently, the International Energy Agency (IEA) raised its worldwide oil demand forecast for 2007 by 200,000 barrels per day due to higher projected demand in non-OECD countries. Meanwhile, OPEC is still of the opinion that the world market for crude oil is over-supplied. As many traders do not share the same view, prices continue to reflect a tight market.

Continuing geopolitical problems have also contributed to recent price fluctuations. Even with the threat of much tighter sanctions, Iran continues to refuse to stop its nuclear program. In Nigeria, labour unions continue to threaten strike action in response to fuel price increases implemented by the previous government, while continuing militant action in the region has kept production well below capacity.

As mentioned in the last Fuel Focus report, fears of potentially significant supply disruptions in the Gulf of Mexico due to hurricane activity add a premium to the price of crude oil this time of year.

Figure 6: Crude Oil Price Comparisons



Changes in Crude Oil Prices

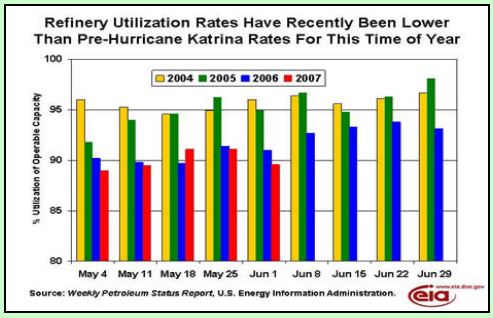
Crude Oil Prices	Week ending: 2007-06-15		Change from:			
			Previous Week		Last Year	
	$Can/ m^3	$US/ bbl	$Can/ m^3	$US/ bbl	$Can/ m^3	$US/ bbl
Edmonton Par	446.00	66.54	-0.23	-0.04	-43.42	-3.44
WTI	446.71	66.65	+5.05	+0.75	-37.86	-2.64
Brent	472.13	70.44	-4.49	-0.67	+6.64	+3.88

Source: NRCan

U.S. Refinery Utilization

Lately, while retail gasoline prices have received the bulk of attention, a related statistic, refinery utilization, is also being closely watched and some analysts are anxious to figure out what lies ahead over the next few weeks for this statistic.

In 2004 and 2005, prior to the devastating hurricanes in the fall of 2005, refinery utilization rates in the U.S. recovered sharply from seasonal late winter maintenance to reach levels by May and June hovering around 95%. However, refinery utilization rates in May and June 2006, and again in May 2007, were well below that percentage. In 2006 refinery utilization was influenced by Hurricanes Katrina and Rita both directly and through their impacts on maintenance schedules. This year, refinery outages and maintenance extending into the early part of summer have kept refinery utilization rates at roughly 90%.



Source: IEA, This Week in Petroleum, June 6, 2007

Refinery Maintenance Operations

Turnarounds, planned and unplanned shutdowns and maintenance operations are all terms you may have read in recent issues of Fuel Focus. Because refineries operate around the clock during normal operations, periodic maintenance is required, along with occasional major overhauls. An appropriate analogy might be that of a car owner and the regular maintenance operations needed to ensure reliable transportation. When refiners perform maintenance, they usually need to stop processing hydrocarbons and slow or stop producing finished products. However, the complexity and magnitude of the refinery work far exceeds the car maintenance example.

Refinery outages, which derive from a number of situations, may be planned or unplanned. In all cases, part or all of a refinery is taken out of service. In general, four types of outages are identified: planned turnaround, planned shutdown, unplanned shutdown, and emergency shutdown.

Planned refinery turnarounds are major maintenance or overhaul activities. The frequency of major turnarounds varies by type of unit, but may only be done every 3 to 5 years. Planned turnarounds frequently require 1 to 2 years of planning and preparation, and sometimes longer when major capital equipment changes are required. The actual turnaround may then last about 20 to 60 days.

Maintenance activities during a planned turnaround might include routine inspections for corrosion, equipment integrity or wear, replacement of catalysts and include improvements such as equipment upgrades. Turnarounds are large and expensive. For example, a recent 29-day turnaround in a U.S. refinery cost $US 39 million dollars and used 1,800 outside contractors. The refiner also estimated that it would lose between $US 1.2 and $US 3 million dollars for each day the turnaround went beyond the planned timeline. In addition, refineries have limited ability to perform turnarounds simultaneously due the need for large labour complement coupled with current skilled labour shortages. A 200,000 barrel per day refinery (roughly the size of Irving's in New Brunswick) might normally have 500 people on staff while having 1,500 to 2,000 additional people on the refinery site for a month or so.

Planned shutdowns are smaller in scope and help bridge the gap between planned turnaround intervals and may be 2 to 6 months in planning and preparation and the outage may last 5 to 15 days before returning the processing unit to normal operation. Unplanned shutdowns are unexpected and might result from abnormal or deteriorating process operations, but still operate for 3-4 weeks while material and equipment are purchased. Unknown problems can be discovered and these shutdowns are often prolonged due to manufacturing and shipment delays of parts and equipment. Also an offline unit can be difficult to restart and brought back to full operation. This problem can sometimes extend over several months.

Emergency shutdowns occur when a unit or entire refinery must be brought down immediately without warning such as a fire or power outage. The biggest reason for emergency shutdowns is the unexpected loss of electricity [1]. When major fuel-producing units are offline, production of gasoline or distillate fuels may be reduced, which could cause tightness of supply depending on the region and distribution systems and ultimately perhaps a price hike. How expensive can an emergency shutdown be? The latest Imperial Oil Ltd.'s quarterly report indicates that "Stronger industry refining and marketing margins totaling about $40 million in the first quarter were essentially offset by shutdowns of refinery operating units ..." referring to the Nanticoke refinery fire in Ontario last February.

[1] "Industry Self-Survey Reveals FCC Reliability Trends", Octane Week, Hart Energy Publishing, November 20, 2006.

Source: Excerpt from Refinery Outages: Description and Potential Impact on Petroleum Product Prices, Energy Information Administration, U.S. Department of Energy, March 2007.