The voice of Canada’s transportation fuels industry

The Canadian Fuels Association represents the industry that produces, distributes and markets petroleum products in Canada—including 95 percent of the transportation fuels Canadians rely on to remain mobile and globally competitive. The fuels sector contributes $2.5B to Canada’s GDP each year, and employs nearly 100,000 Canadians at 18 refineries, 21 primary fuel distribution terminals and 12,000 retail service stations throughout Canada.

DID YOU KNOW?

- Canada is the 6TH LARGEST crude oil producer in the world.
- Surging oilsands production is expected to DOUBLE Canada’s crude oil output by 2030.
- Canadian refineries produced 40 BILLION litres of gasoline and 30 BILLION litres of diesel in 2012.
- Refinery workers EARN 50% MORE than workers in the overall manufacturing sector.
- Canadian refineries invested ALMOST 58 BILLION over the last 10 years.
- Refinery volatile organic compound emissions, a key contributor to smog, have been CUT BY 50% over the last 10 years.
- Marine tankers supply eastern Canadian refineries with up to 800,000 b/d of crude oil.
- Canadian refineries supply 95% of transportation fuels used in Canada.
- There are close to 100 “BRANDS” of gasoline in Canada, marketed by 70 different companies.
- Big-box retailers now operate more than 1,500 RETAIL FUEL SITES across Canada.
- Canadians purchased 1.6 MILLION VEHICLES in 2012; only 10,000 were hybrids.
- Transportation services account for 6.7% of Canada’s overall ECONOMIC OUTPUT, more than construction, retail trade and wholesale trade.
- A 2005 or newer vehicle using today’s clean fuels produce 90% LESS SMOG-causing emissions compared to a 1993 vehicle.

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From Crude Oil to Useful Products—We’ll Take You There

CRUDE OIL PRODUCTION AND TRANSPORT

The petroleum industry value chain begins with exploration and extraction activities that produce crude oil, the raw material for refined products. A variety of transportation modes are used to transport crude oil to refineries, including ships, pipelines, rail and barges.

CRUDE OIL CHEMICAL PRODUCTS

Refineries turn crude oil into the products you use every day. No two refineries are identical, but all employ similar processes.

UPGRADING

Upgraders turn bitumen into synthetic crude oil that can then be processed at a refinery.

DISTRIBUTION AND RETAIL

Refined fuels are stored and then distributed to wholesale and retail outlets to fuel various modes of transport. Other products are sent to petrochemical plants where they are transformed into the basic components of everyday products such as cosmetics, textiles and plastics.

CONSUMERS

Transportation fuels are essential to the mobility of people and goods and our quality of life.

CRUDE OIL PRODUCTION AND TRANSPORT

- Canada produces over 3 million barrels of crude oil every day; 2.3 million barrels are exported.
- Canadian refineries consume over 1.7 million barrels of oil per day, of which nearly 723,000 are imported.
- Canada has the third largest oil reserves in the world; 97% are in the oil sands.
- Approximately 3 million barrels of crude oil travel through Canada’s crude oil pipeline network every day.
- Other pipelines, the marine tanker is the most cost-effective way to move oil today.

CRUDE OIL CONSUMPTION BY MARKET REGION (2012, 000s b/d)

<table>
<thead>
<tr>
<th>Region</th>
<th>Total Refining Capacity (thousands of barrels per day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlantic Canada</td>
<td>349</td>
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<tr>
<td>B.C.</td>
<td>448</td>
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<tr>
<td>Ontario</td>
<td>364</td>
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<tr>
<td>Quebec</td>
<td>349</td>
</tr>
<tr>
<td>Western Canada</td>
<td>589</td>
</tr>
</tbody>
</table>

REFINING CAPACITY (thousands of barrels per day)

- Qatar’s refining capacity was 142.7 million barrels per day in 2012.
- Canada’s refining capacity was 22.3 million barrels per day in 2012.

AVERAGE OUTPUT FROM A BARREL OF OIL (%), CANADA

- Propane character: 2.6
- Butane character: 8.8
- Light naphtha: 15.9
- Heavy fuel oil: 0.8
- Light fuel oil: 7.2
- Aviation fuel: 11.0
- Diesel fuel: 23.5
- Gasoline: 33.6

REFINING PROCESS

- Boiler
- Distribution tower
- Propylene – 2.6
- Butane – 8.8
- Light naphtha – 15.9
- Heavy fuel oil – 0.8
- Light fuel oil – 7.2
- Aviation fuel – 11.0
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Canadian Fuels Association
www.canadianfuels.ca