

EXPANSION IN PETROLEUM REFINING

There were 43 operating petroleum refineries in Canada with a total daily crude oil throughput capacity of 700,050 barrels as of January 1, 1957, according to the Department of Mines and Technical Surveys annual petroleum refinery survey. Compared with the previous year the crude oil throughput capacity increased 81,600 barrels daily, a 13.2 per cent rise. Gains in refinery capacity were recorded in all principal refinery provinces although new capacity in Quebec and Nova Scotia accounted for 75 per cent of the national increase. A new refinery was completed in Halifax to replace a plant which had operated since 1918 and a new refinery commenced operations at Grande Prairie, Alberta. Enlargement of plant facilities was underway at the end of 1956 in all provinces having a petroleum-refining industry except New Brunswick and the Northwest Territories. There are no refineries in Newfoundland, Prince Edward Island or the Yukon Territory.

Expansion of the petroleum-refining industry has continued at a steady rate since 1945 in keeping with Canada's population growth and increasing economic activity. Throughput capacity has tripled since 1945 thereby enabling the industry not only to keep pace with increasing petroleum product demand but also to supply a somewhat larger share of total product demand than was possible ten years ago. A parallel growth has taken place in catalytic-cracking capacity, and in capacities of other modern processes which have been installed during recent years. Thermal-cracking capacity is now being steadily decreased and catalytic-cracking capacity appears to be reaching a maximum percentage of crude-handling capacity. At the end of 1956 thermal-cracking capacity constituted 19.5 per cent of crude oil throughput capacity; catalytic-cracking capacity (fresh feed), 32.0 per cent of crude capacity; catalytic reforming, 8.3 per cent; polymerization, 3.0 per cent; and hydrogen treating, 2.8 per cent.

The 43 refineries in Canada are operated by 24 companies. One company operates nine refineries; another operates five; two companies each operate three refineries; three companies each operate two refineries; and there are 17 one-company operations.

Quebec and Ontario continue to have close to 60 per cent of Canada's refinery capacity and plans for expansion and for new refineries indicate a continuance of this proportion. Plant modernization and expansion has continued throughout the rest of Canada, however, and capacities in British Columbia, the Prairies and the Maritimes are in line with market demand in these regions, although petroleum product imports are still received to a certain extent in all regions.

Growth of Canada's petroleum-refining industry is well illustrated in a comparison of total runs to stills (crude oil, natural gas liquids and other materials) for the past few years:

Year	Total Runs to Stills at Canadian Refineries (bbls.)
1956	234,366,029
1955	195,992,634
1954	173,116,925
1953	158,341,521
1952	141,892,315
1945	65,903,028

The percentage of domestic crude oil received at Canadian refineries has also greatly increased since 1945 but due to the large concentration of refining capacity in Montreal the ratio of domestic to foreign receipts has been constant during the past three years.

Canadian Crude as a Percentage of Total Refinery Crude Oil Receipts

Year	Percentage
1956	53.9
1955	54.7
1954	54.7
1953	46.0
1952	41.7
1945	8.8

It should be noted, however, that there is a continually increasing consumption of Canadian crude in refineries, due not only to greater runs to Canadian stills each year, but also to delivery of increasing amounts of crude oil to United States refineries. These exports increased by 28 million barrels in 1956 to a total of 42.8 million barrels.

For Canada as a whole in 1956, imports of crude oil from Venezuela accounted for 74.3 per cent of total crude oil imports, Middle East imports accounted for 17.4 per cent; United States imports, 5.1 per cent; and Trinidad and Colombia, 3.2 per cent. Comparable figures for 1955 were 78.4, 9.2, 9.0 and 3.3 per cent, respectively.

From domestic and imported crude oil, plus small amounts of natural gas liquids and other materials, the petroleum-product output from Canadian refineries was equivalent to 83.7 per cent of total domestic demand. A supply and demand analysis of all oils, taking into consideration refinery receipts of domestic and foreign crudes, imports and exports of crude and petroleum products, and stock changes, shows that Canada's crude oil producing and refining industry met the equivalent of 60.6 per cent of the country's petroleum product requirements from domestic crude oil supplies (preliminary estimate), compared with 53.4 per cent in 1955.

(Over)