

composition and deployment of construction crews; and the construction of facilities.

*Impact of a pipeline and Mackenzie corridor development on the physical environment.* This phase of the hearings studied the impact on the land, the air and the water; and covered such matters as permafrost; river crossings; slope stability; gravel and other borrow locations.

*Impact of a pipeline and Mackenzie corridor development on the living environment.* This phase of the hearings included studies of the impact on plant and animal life, including wildlife, mammals and fish.

*Impact of a pipeline and Mackenzie corridor development on the human environment.* This phase of the hearings was concerned with social and economic impacts.

The NEB commenced hearings in October 1975, for a thorough examination of the Mackenzie Valley Pipeline in terms of the following areas of interest:

*Facilities:* Alternate systems of transportation, design and capacity of facilities, construction plan and pipeline operations and maintenance; right-of-way, interconnection pipeline facilities, and alternate routes; cost of facilities; and agreements between Trunk Line and Trunk Line (Canada).

*Contracts and financial matters:* Contracts, including the examination of supply, transportation sales contracts; and financial matters, including proforma financial statements, cost of service and tariffs and financing plans.

*Socio-economic environmental and other public interest matters:* Impact on the Canadian economy; Canadian content; social-economic factors; environmental matters; and other matters of public interest.

*Supply and requirements:* Supply of gas which might be available to the pipeline from Canadian and Alaskan sources; supply of Canadian gas from all other sources; requirements for gas to satisfy the Canadian market.

## Processing

## 13.2.6

**Oil.** Recent changes in energy prices and the reduction in exports have led to a significant change in the outlook for new refinery construction. Canada has a surplus of capacity and the prospect of a slower growth of demand. Table 13.8 gives details of oil refinery capacity in Canada in 1975, with scheduled completion dates for new facilities. Some expansion of existing refineries is already in progress. In 1975 Canada had 38 operating refineries with a total refining capacity at year-end of more than 2 million b/d (300 000 m<sup>3</sup>/d). Refinery runs were about 1.8 million b/d (290 000 m<sup>3</sup>/d); net sales of products averaged 1.6 million b/d (250 000 m<sup>3</sup>/d), representing a decline of 2% over 1974. Production of Canadian refineries is closely in balance with total market demand, although there is some interchange of individual products to and from the US. Both exports and imports were down from 1974.

In the past, the location and size of Canada's refineries were determined by the tendency to install them close to centres of consumption. Thus approximately 57% of the total capacity is in the populous regions of southern Ontario and Quebec. Ontario has two main refining centres, in Sarnia and south of Toronto; Quebec has the largest refining centre, in Montreal, as well as a refinery in Quebec City. British Columbia has seven refineries, most of them close to Vancouver.

A more recent trend has been to increase the size of individual refineries to effect economies of scale. Although the average size of individual refineries is increasing all over Canada, this is particularly evident in Alberta, Saskatchewan and Manitoba. Many small refineries close to individual cities are now being phased out and replaced by two large refineries in Edmonton, close to the main sources of crude in Alberta. They will be of optimum size and will confine any possible environmental problems to one area. Saskatchewan will lose one small refinery, but one of those remaining will be expanded.

A third factor influencing refinery location has been proximity to deepwater ports where crude input is received by tanker. The economies obtained with huge