

## **Non-withdrawal uses of water**

### *Hydro-electric generation*

Canada still has vast undeveloped water-power potential, which, if developed, would greatly increase the 36.8 million kilowatts of hydro capacity installed at the end of 1974. There are currently major hydro developments under way on the Nelson River in Manitoba, the Peace and Columbia Rivers in British Columbia, and the rivers flowing into James Bay in Quebec. Recently, construction at the 5,225,000-kw Churchill Falls site on the Churchill River in Labrador was completed, providing enough electrical generation for the needs of about 2.6 million Canadians.

By the year 2000, hydro capacity will probably be double the 1974 level. While this should not exhaust all the potential water-power sites in Canada, it reflects the economic and environmental limits to hydroelectric development and the increasing competitiveness of energy from nuclear fuels. By the end of the century, only about 30 per cent of electrical energy will be generated from water-power.

### *Transportation*

Water provides the most economical means of transportation for the bulky raw materials of Canada's export trade — wheat, pulp and paper, lumber and minerals — on their way to world markets. The idea that inland transport by water was becoming obsolete has been contradicted by the continuing growth in the volume of waterborne goods, not only in Canada but also in the United States and Europe.

The major part of Canada's waterborne traffic moves on the St. Lawrence Seaway. This joint Canadian-American project, completed in 1959 at a cost of \$470 million (Canada's share was \$330 million), is a symbol of faith in the future of waterborne transportation. Over the decade from 1967 to 1976, cargo traversing both the Welland Canal section and the Montreal/Lake Ontario section averaged some 68.8 million tonnes (67.7 million tons). The year 1976, with a total traffic of 72.9 million tonnes (71.7 million tons), compared favourably with the average and represented a marked improvement over 1975 and 1974, when cargoes of 68 million tonnes (66.9 million tons) and 61.1 million tonnes (60.1 million tons) respectively were carried.