

The fact remains, however, that water is an essential material in all industrial operations and increasing industrialization inevitably leads to greater use of water.

It is impossible at present to say exactly how much water is used by Canadian industry. Some industrial plants purchase water from their municipalities. Others find it more convenient, or more economical, to develop their own water-supplies by drilling wells or by building their own plants beside lakes or rivers.

Many industrial uses are non-consumptive in nature -- that is, the water is returned to a stream channel after it has been used. The returned water, however, is often polluted, either by the addition of undesirable material or by heating during use. Pollution of this kind is a constantly increasing problem wherever industry is concentrated in Canada, particularly on some of the Great Lakes, on the St. Lawrence River and on some rivers in British Columbia.

*Hydro-electric-power development:* Electrical energy has been called the master tool of mankind. In Canada, it is the economy's mainspring -- the efficient servant of modern life. Canadian industrial development since the turn of the century has depended on water-power as its principal source of energy and, despite the current emphasis on thermally-generated power, water is still far in the lead.

Of the 237,000 million kilowatt hours of electrical energy generated in Canada in 1972, 178,000 million, or about 75 per cent, were generated in hydro-electric plants. Industry used nearly 60 per cent of the total energy, commercial operations and street lighting about 15 per cent, and residences and farms more than 20 per cent of the total.

Every year, new generating capacity is added to help satisfy modern Canada's rapidly-increasing demands. In recent years, there has been a marked trend to the installation of thermal plants, because, in many parts of Canada, most of the hydro-electric sites within economic transmission-distance of the population and industrial centres have been developed. Planners, therefore, have had to turn to other sources of electric energy. Canada still has a vast undeveloped hydro-power potential, which, if developed, would greatly increase the 31 million kilowatts of hydro capacity installed at the beginning of 1973. Moreover, recent advances in extra-high-voltage transmission techniques are providing a renewed impetus to the development of hydro-power sites previously considered too remote. Already, work has begun on the development of the power potential of the Nelson River in Manitoba, the Churchill River in