

gas are used to fuel the thermal-electric plants supplying a large part of the province's power requirements. In Alberta, the principal hydro-electric developments are located on the Bow River and its tributaries but there are substantial power resources located in northern regions of the province, somewhat remote from present centres of population. In Saskatchewan, the existing hydro-electric plants are located in the northern areas and their output is used almost exclusively for mining purposes. However, significant water power resources still remain in the central and northern parts of the province and, in 1963, power from new developments on the Saskatchewan River will be fed into the transmission network serving the more settled areas.

The water power resources of Ontario are exceeded in total magnitude only by those of Quebec and British Columbia. In terms of installed hydro-electric capacity, Ontario ranks second. The largest power development in the province is located at Queenston on the Niagara River, where the Sir Adam Beck-Niagara Generating Stations Nos. 1 and 2 and the associated pumping-generating station have a combined capacity of 2,521,000 hp. In recent years, the development of water power sites in Ontario has progressed at a formidable rate, particularly those located reasonably close to demand areas. Most of the province's remaining undeveloped hydraulic resources are located in areas relatively distant from power markets, a factor that has increased the emphasis on thermal-electric development. However, this emphasis is being modified as a result of the initiation of development of a number of the more remote hydro-electric sites to supply power to an integrated system drawing energy from both hydraulic and thermal sources.

Quebec is the richest province in terms of water power resources, having more than 30 p.c. of the total recorded for Canada. Quebec also ranks highest in terms of developed water power, the present installation of 12,576,845 hp. representing about 47 p.c. of the national total. The Beauharnois development on the St. Lawrence River, with 2,161,000 hp. installed, is the greatest concentration of hydro-electric capacity in one plant in Canada. Notable also are the Bersimis I development on the Bersimis River and the Shipshaw plant on the Saguenay River, each with installed capacities of 1,200,000 hp. A major power plan which will represent a significant advance in the development of Quebec's hydro-electric resources is under construction. The plan involves the harnessing of the headwaters of the Manicouagan and Outardes Rivers and will eventually make available nearly 6,000,000 hp. of additional capacity at new and existing developments on the two rivers.

The water power resources of New Brunswick and Nova Scotia, although small in comparison with those of other provinces, are a valuable source of power. Numerous rivers in both provinces provide moderate-sized power sites advantageously situated for urban or rural use. In Prince Edward Island there are no large streams and, consequently, water power sites are limited in size and are used for small mills. On the Island of Newfoundland, topography and runoff conditions favour the development of power, even though the drainage areas of the rivers are, in general, not great. Considerable development has taken place on the Island, mainly to serve the pulp and paper industry. In Labrador, the Hamilton River and its tributaries rank as one of the largest undeveloped sources of water power in Canada.

An accurate comparison of the magnitude and development of Canada's water power resources with those of other countries is not possible because world statistics are incomplete and are not tabulated on the same basis. From information available, however, it is seen that Canada is exceeded only by the United States in the total of water power capacity actually installed, and only by Norway in the amount of installation per thousand of population. In terms of potential water power resources, Canada ranks fifth. However, with the exception of the United States, water power resources in Canada are more readily available to prospective markets than they are in the countries that have greater power potential.

Table 1 lists, by province or territory, the estimated total water power resources of Canada and the total existing capacity of all water power plants.