

The incidence of large water power resources in those regions in which the more important mineral deposits have been found has greatly facilitated mining development. Recent examples are the nickel mining and refining complex at Thompson, Man., which uses hydro power generated in the Kelsey plant on the Nelson River, and the iron ore mining operations in Labrador, supplied by the Twin Falls plant on the Unknown River.

Metal mining, a very important division of the Canadian mining industry, is carried on mainly in two physiographic regions, the Western Cordillera and the Canadian Shield. In the Western Cordillera, the mountainous topography and the relatively high amounts of precipitation favour the development of water power. In the Canadian Shield, which is a Precambrian formation stretching in a wide sweep around Hudson Bay from the Mackenzie River basin to the eastern tip of Labrador, heavy glaciation in recent geological times has formed river systems which are comparatively young and are characterized by large numbers of lakes connected by short river sections with numerous rapids and falls suitable for the development of hydro-electric power.

Canada's pulp and paper industry is one of the world's great industrial enterprises. Total mill capacity for the production of newsprint paper is considerably greater than that of any other country in the world and in total production of wood pulp, Canada is second only to the United States. The fact that over 90 p.c. of the manufactured newsprint is exported gives some indication of the importance of the industry to the Canadian economy. By far the larger portion of the energy used in the pulp and paper industry is derived from water power.

Subsection 3.—Water Power Resources, Undeveloped and Developed

Table 2 presents a summary of developed water power in Canada and an estimate of undeveloped water power potential, based on records maintained by the Water Resources Branch of the Department of Energy, Mines and Resources. Estimates of available power are shown for undeveloped sites only; for developed sites, the total generating capacity actually installed is indicated. It should be noted that the capacity installed at an existing hydro-electric development is frequently in excess of the continuous power available at the site. The relationship between installation and available power is explained on p. 639.

2.—Water Power Resources, by Province, as at Jan. 1, 1966

Province or Territory	Undeveloped Water Power			Developed Water Power
	Available Continuous Power at 88 p.c. Efficiency			Installed Generating Capacity
	at Q95 ¹	at Q50 ²	at Qm ³	
	kw.	kw.	kw.	kw.
Newfoundland.....	1,240,000	3,635,000	4,871,000	466,000
Prince Edward Island.....	—	1,000	2,000	—
Nova Scotia.....	21,000	112,000	165,000	143,000
New Brunswick.....	62,000	221,000	497,000	282,000
Quebec.....	8,500,000	25,800,000	32,500,000	10,339,000
Ontario.....	467,000	1,102,000	1,663,000	8,064,000
Manitoba.....	2,981,000	5,501,000	5,853,000	1,074,000
Saskatchewan.....	773,000	1,298,000	1,559,000	320,000
Alberta.....	395,000	3,244,000	4,866,000	445,000
British Columbia.....	4,946,000	16,635,000	24,665,000	2,616,000
Yukon Territory.....	664,000	3,237,000	5,689,000	28,000
Northwest Territories.....	884,000	2,232,000	3,322,000	35,000
Canada.....	21,396,000	63,918,000	85,652,000	21,792,000

¹ Power equivalent of flow available 95 p.c. of the time.
of the time.

² Power equivalent of flow available 50 p.c.

³ Power equivalent of arithmetical mean flow.