

1.—Available and Developed Water Power in Canada, by Provinces, as at Dec. 31, 1941

Province or Territory	Available 24-Hour Power at 80 p.c. Efficiency		Turbine Installation
	At Ordinary Minimum Flow	At Ordinary Six-Month Flow	
	h.p.	h.p.	h.p.
Prince Edward Island.....	3,000	5,300	2,617
Nova Scotia.....	20,800	128,300	139,217
New Brunswick.....	68,600	169,100	133,347
Quebec.....	8,459,000	13,064,000	4,556,943
Ontario.....	5,330,000	6,940,000	2,617,495
Manitoba.....	3,309,000	5,344,500	420,925
Saskatchewan.....	542,000	1,082,000	90,835
Alberta.....	390,000	1,049,500	71,997
British Columbia.....	1,931,000	5,103,500	788,763
Yukon and Northwest Territories.....	294,000	731,000	22,899
Canada.....	20,347,400	33,617,200	8,845,038

The figures given in the above table are the result of a systematic study of all existing stream-flow and power data available from Dominion, provincial and private sources. The figures of available water power are based upon rapids, falls and power sites of which the actual drop or the head possible of concentration has been measured, or at least carefully estimated. Many unrecorded rapids and falls of undetermined power capacity exist on rivers and streams from coast to coast. These will become available for tabulation only as more detailed survey work is completed; this is particularly true in the less explored northern districts. Also, no consideration has been given to the power concentrations that are feasible on rivers and streams of gradual gradient, where economic heads may be created by the construction of power dams, unless definite studies have been carried out and the results made matters of record. In brief, figures of available power quoted represent only the *minimum* water-power possibilities of the Dominion.

The total turbine installation of 8,845,038 h.p. represents the sum of the manufacturers' ratings of the different units under the heads at which they are installed. It is not correct to subtract this figure from the totals of available power in columns 1 or 2 to determine what power remains undeveloped because it has been proved sound practice to allow a turbine installation averaging 30 p.c. in excess of the power at ordinary six-month flow. On this basis the 'at present' recorded resources will provide for a total turbine installation of 43,700,000 h.p. The present turbine installation, therefore, indicates the development of about 20 p.c. of the recorded water-power resources of Canada.

Subsection 2.—Statistics of Water-Power Development

Growth of Water-Power Development.—The commencement of the long-distance transmission of electricity at the beginning of the present century resulted in the extensive development of hydro-electricity for distribution over wide areas. The growth of installation during the period from 1925 to 1941 is shown, by provinces, in Table 2.