practice, the water-power resources of Canada* would allow an economic turbine installation of over 52,000,000 h.p. and that only about 21 p.c. of presently recorded resources has been developed.

Additional information regarding Canada's water-power resources is included in the 1940 Canada Year Book, pp. 353-364. An earlier comparison is made with the resources of other countries and an extensive review is given of problems connected with the development, distribution and merchandising of power in Canada.

Subsection 2.—Development and Growth of Water Power in Canada

Although extensive utilization at present is being made of Canada's water-power resources, there are large reserves still available for development. The greater part of this undeveloped power lies in the more remote parts but a number of sites within economic transmission distance of existing centres of population have not been exploited as yet and existing power reserves not too distant should be sufficient to meet the prospective demand for some years at least.

The development from year to year of Canada's water-power resources is a good index of the country's industrial growth and of the change in its economic life since the beginning of the present century. In 1900, prior to the inception of long-distance transmission of electricity, Canada's economy was based largely on agriculture and the total of hydraulic installations, mostly small mills, was only 173,000 h.p. With the successful solution of the problems of transmission of electrical energy for use in distant communities, the development of large hydraulic projects became practicable and, by 1910, the total installation had risen to 977,000 h.p. In ensuing decades, the growth in installed capacity, partly speeded by war demands, proceeded at an accelerated rate so that by 1920 the total was 2,515,000 h.p.; by 1930, 6,125,000 h.p.; by 1940, 8,584,000 h.p.; and by the end of 1948, installed capacity had reached 10,870,718 h.p. Continued rapid growth during the next several years is indicated by plants now under construction or planned.

The availability of large amounts of hydro-electric energy from the water-power developments has so fostered the economic utilization of the natural products from land, mine and forest, that Canada has become highly industrialized and is now one of the more important manufacturing countries. Low-cost power from Canada's rivers is fundamental in meeting the enormous demands of its largest industry, pulp and paper manufacturing, which ranks as one of the world's great industrial enterprises; it also allows the economic mining, milling and refining of base and precious metals and facilitates their fabrication into a multitude of manufactured articles. The great hydro-electric undertakings, built to meet the domestic and industrial requirements of the country, were of incalculable value to Canada's participation in two world wars, particularly in the Second World War. Between 1939 and 1945, approximately 2,000,000 h.p. was added to water-power capacity, all of which was used for war production; great quantities of power were also diverted from normal to war purposes; this allowed Canada to produce materials and munitions of war on a very large scale proportionate to population.

From hydro-electric developments ranging in size from a few hundred to more than 1,000,000 h.p., networks of transmission lines carry power not only to most urban centres of Canada but also in increasing degree to the rural areas of the country. The wide distribution of power has facilitated the decentralization of

* Not including the new province of Newfoundland which entered Confederation March 31, 1949.