

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 1947, installed capacity had reached 10,491,000 h.p. Among countries of the world, Canada is second only to the United States in total hydro-electric installed capacity.

The availability of large amounts of hydro-electric energy from the Dominion's 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 the Dominion's 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 one million horse-power, 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 facilitates the dispersion of industry so that manufacturing processes covering foods, textiles, forest products and many others are important consumers of hydro-electric energy.

This wide distribution of hydro-electric power has also benefited the residents of small towns and villages by making available the same conveniences of household electric appliances as those enjoyed in the large towns and cities; these services are being rapidly extended to rural communities.

On the commonly accepted basis of one horse-power being the equivalent in energy to the work of ten men, Canada's present hydro-electric installation furnishes energy equal to that of more than 100,000,000 workers constantly employed.

### **Subsection 1.—Development and Growth of Water Power**

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 of the Dominion but many 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 to come.