

more remote districts, water power will facilitate the utilization of mineral and other resources and promote the establishment of new communities; from the viewpoint of moving Canada's frontiers northward, the availability of considerable amounts of potential power in the more northern and at present rather inaccessible regions of the country is a definite advantage.

PROVINCIAL DISTRIBUTION

Considerable amounts of water power are being used in all provinces, with the exception of Prince Edward Island, where resources are small. The Provinces of Ontario and Quebec, which contain nearly 50 per cent of the total available power and almost 76 per cent of the developed power, have now developed about 38 per cent of their presently recorded total resources. These central provinces have become highly industrialized by the use of water power. As the development of Canada's natural resources proceeds, the fortunate incidence of water power in proximity to mineral deposits, pulpwood, and other natural resources is becoming more apparent.

British Columbia, traversed by three distinct mountain ranges and with, on the whole, a high rate of precipitation, has many mountainous rivers which offer opportunity for power development. The Province ranks second in available resources and is exceeded only by Quebec and Ontario in installed capacity. A large part of present development is located in the southern portion of the province, but the largest development is the northern Kemano plant of the Aluminum Company of Canada with a present capacity of 600,000 h.p. The British Columbia Power Commission, which was organized in 1945, has become an important power-producing and distributing agency.

In Alberta, the larger hydro-electric developments from which Calgary Power Limited serves a large part of the southern portion of the province, are located on the Bow River and tributaries. The greater part of water-power resources is located in the northern half of the province, rather remote from present centres of population.

In Saskatchewan, water-power developments are confined to mining uses in the northern areas where water-power resources are abundant. The transmission network of the Saskatchewan Power Corporation of the Provincial Government, serving the more settled areas, is supplied exclusively by fuel-power plants. Large reserves of coal, oil, and natural gas are located in both Saskatchewan and Alberta; these fuels provide the more economic sources of power in many parts of both provinces, particularly in southern Saskatchewan.

Of the Prairie Provinces, Manitoba has the largest water-power resources, there being great potential power on the Saskatchewan, Nelson, and Churchill Rivers. The larger present developments are located on the Winnipeg

River and serve Winnipeg, adjacent municipalities, and the transmission network of the Manitoba Power Commission. The Commission is at present serving about 496 cities, towns and villages and is carrying out a vigorous programme of rural electrification. It is estimated that approximately 43,000 farms were receiving service at the end of 1956.

Ontario has large water-power resources, being exceeded in this respect only by Quebec and British Columbia. It has developed about 58 per cent of its recorded available power and ranks second in power production among the provinces. The Hydro-Electric Power Commission of Ontario is the greatest power-producing and distributing organization in Canada; it operates 65 hydraulic generating stations with a total capacity of more than 4,000,000 h.p. the largest development being on the Niagara River at Queenston where the 1956 capacity of the Sir Adam Beck-Niagara Generating Stations Nos. 1 and 2 was 1,820,000 h.p. In addition the Commission purchases nearly 1,000,000 h.p. on contract. At the end of 1956, power was being supplied to approximately 1,345 communities; rural electrification receives special consideration and approximately 139,500 farms are now being served.

The Province of Quebec is richest in water-power resources, containing more than 35 per cent of the total recorded for Canada. Quebec also ranks highest in developed power, its present installation of 8,489,957 h.p. being more than 46 per cent of the total for all provinces and representing the development of about 33 per cent of its presently recorded resources. Two of the larger hydro-electric plants in the world are located in this province; the Quebec Hydro-Electric Commission's Beauharnois development on the St. Lawrence River has a present capacity of 1,408,000 h.p. and the Shipshaw plant of the Aluminum Company of Canada on the Saguenay River is rated at 1,200,000 h.p. Power production in the province is facilitated greatly by the regulation of stream flow by the Quebec Department of Hydraulic Resources through the storage dams it operates on controls. Rural electrification has made good progress and extensions of service through co-operative distribution systems are being fostered by the Quebec Rural Electrification Bureau.

The water powers of New Brunswick and Nova Scotia, although small in comparison with the resources of other provinces, constitute a valuable source of power of which considerable use is being made; both provinces have numerous rivers upon which moderate-sized power sites exist within economic transmission distance of the principal cities and towns; other sites are advantageously situated for the utilization of timber and mineral resources. These provinces also are favoured with abundant indigenous coal supplies. In Prince Edward Island, there are no large streams and consequently water-power sites are limited in size to those used for small mills.