

on the Winnipeg River supplied most of the power requirements of southern Manitoba. However, with the advent of high-voltage, long-distance transmission, it may be expected that ever-increasing amounts of power from hydro-electric stations on northern rivers will be carried south to help meet the province's constantly growing power demands. The first high-voltage, long-distance link will go into service in 1965 to carry power from the Saskatchewan River in Manitoba to load centres in the southern parts of the province. Large water power resources exist in the central and northern parts of *Saskatchewan*, principally on the Churchill, Fond du Lac, and Saskatchewan Rivers. In 1963, power from the first development on the Saskatchewan River was fed into the transmission network of the provincially owned Saskatchewan Power Corporation, which serves the more settled areas of the province. These areas previously had been served by electric power from thermal plants fuelled by coal, oil or natural gas, the hydro-electric power generated in the province being used almost exclusively for mining purposes in northern areas. In *Alberta*, the principal hydro-electric developments are located on the Bow River and its tributaries and, from these developments, Calgary Power Ltd. serves most of the southern part of the province. Substantial water power resources are located in northern regions and, although these are somewhat remote from present centres of population, the advent of extra-high-voltage transmission has enhanced the prospect of their development.

As mentioned previously, *British Columbia* has many mountain streams that offer abundant opportunity for the development of hydro-electric power. In terms of recorded available water power resources, developed and undeveloped, the province ranks second in Canada and is exceeded only by Quebec and Ontario in the amount of generating capacity installed. Notable for the magnitude of their power potential are such rivers as the Columbia, the Fraser, the Peace and the Stikine. Up to the present time, however, hydro-electric developments on smaller rivers in the southern areas have satisfied the major load requirements of the province but now the immense power resources of the Peace River are in process of being harnessed and by 1968 will supplement the energy supply. Development of the Columbia River, which flows southward and crosses the international boundary, is also getting under way; it will provide initially three huge storage reservoirs and eventually make available a significant amount of 'at site' power in the Canadian portion of the basin. The foremost producer and distributor of electric power in British Columbia is the provincially owned British Columbia Hydro and Power Authority.

Power from present developments in the *Yukon Territory* and the *Northwest Territories* is used almost exclusively to satisfy the needs of local mines and adjacent settlements. Owing to the lack of developed native fuel sources and to transportation difficulties, water power is of special importance in the development of mining areas, such as Mayo in the Yukon Territory and Yellowknife in the Northwest Territories. In 1948, to encourage the development of the resources of Northern Canada, the Federal Government established what is now the Northern Canada Power Commission (see p. 137), to be responsible for the construction and management of public utility plants. In Yukon Territory, most of the resources are located on the Yukon River and its tributaries. The possibility exists of diverting the headwaters of the Yukon River through the Coast Mountains to utilize a high head near tidewater in northern British Columbia but such a development would affect adversely the potential of sites on the main river. Resources in the Northwest Territories have not been surveyed to the same extent as those in Yukon Territory but they are nevertheless known to be of considerable magnitude, particularly on rivers flowing into Great Slave Lake. Of major significance, as well, is the hydro-electric potential of the South Nahanni River, which drains to the Mackenzie River via the Liard River. On the basis of preliminary investigations, it is estimated that, with total regulation and complete use of the head susceptible of development, the hydro-electric potential of the South Nahanni River would be close to 1,000,000 kw. Indications are that the rivers draining the District of Keewatin, north of Manitoba, also will contribute materially to the total power potential of the Northwest Territories.