

on the Winnipeg River supplied most of the power requirements of southern Manitoba. Manitoba Hydro's high-voltage, long-distance transmission lines, however, will carry ever-increasing amounts of power south from hydro-electric stations on northern rivers to help meet the province's constantly growing power demands. 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 Squaw Rapids, the first hydro 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. In 1965, energy from a large hydro unit on the Brazeau River in the headwaters of the North Saskatchewan River came on line, augmenting the energy from the Bow River plants. Substantial water power resources are located in the 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.

*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, now well under way, is designed to provide initially three huge storage reservoirs and eventually to 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. 150), 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, could also contribute materially to the total power potential of the Northwest Territories.