CHAPTER XIV.—POWER GENERATION AND UTILIZATION

CONSPECTUS

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The interpretation of the symbols used in the tables throughout the Year Book will be found on p. viii of this volume.

Section 1.—Water Power Resources—Available and Developed*

Canada, a land of many large lakes and fast-flowing rivers, is richly endowed with immense water power resources. With the exception of the prairies of the mid-west, these resources are found in considerable magnitude in almost every part of the country.

British Columbia, traversed by three distinct mountain ranges and with, generally speaking, a high rate of precipitation, has many mountain rivers which offer abundant opportunity for the development of hydro-electric power. Notable for 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 part of British Columbia have supplied the province's major load requirements. The immense power resources of the larger rivers have gone unused, chiefly because of remoteness from present demand areas or because of conflicts of interest between fisheries and power development. The water power resources of British Columbia, in total magnitude the second greatest in Canada, have played and will continue to play a very important part in the development of the province.

Important water power sites await development on the Yukon River in the Yukon Territory and on the South Nahanni River in the Northwest Territories. Indications are that the rivers draining the District of Keewatin, north of Manitoba, will also contribute materially to the total power potential of the Northwest Territories. In view of the lack of developed native fuel sources and difficulties in transportation, water power is of special importance in the development of mining areas such as those at Yellowknife in the Northwest Territories and at Mayo in the Yukon Territory.

Of the three Prairie Provinces, Manitoba has the greatest water power potential. For many years, the more heavily populated southern region of the province has been supplied from hydro-electric developments on the Winnipeg River. With the advent of high-voltage, long-distance transmission, however, power from hydro-electric stations on northern rivers will flow south to help meet the constantly growing demands of industrial, urban and rural users. In both Alberta and Saskatchewan, abundant reserves of coal, oil and natural gas are used to fuel the thermal-electric plants which satisfy much of the demand for power in these provinces. In Alberta, the principal existing hydro-electric developments are located on the Bow River and its tributaries, but there are substantial power resources in northern regions of the province, too remote from urban centres to

* Revised by the Water Resources Branch, Department of Northern Affairs and National Resources, Ottawa.