

within their borders more than half of the total available water-power resources and more than three-quarters of the developed water power of Canada. In the Maritime Provinces and in British Columbia the incidence of water power in proximity to large supplies of pulpwood has also been favourable.

Canada's geological formations, climate, and topography have resulted in: the creation of great fresh-water areas; the gathering of the resultant run-off into river systems; and the concentration of river flow into natural reservoirs and power heads, or at least into areas where such can be economically created by artificial means.

Geologically, Canada is divided into six main regions: the Precambrian or Canadian Shield, the St. Lawrence Lowland, the Cordilleran, the Appalachian and Acadian, the Interior Plains, and the Hudson Bay Lowland. The boundaries of these regions are shown on the map of the Water Powers of Canada, facing p. 356, as well as on the geological charts on p. 15 and facing p. 24 of the 1939 Year Book. The Canadian Shield, St. Lawrence Lowland, and Cordilleran Regions include predominant proportions of both resources and present installation; the greatest power rivers have their sources either in the Precambrian Shield or in the Cordilleran Region.

**The Precambrian Region.\***—Slightly more than one-half Canada's area of 3,695,000 square miles lies in the geologically old and time-worn Precambrian Region or Canadian Shield. Large areas of it are rocky and have scant surface resources but are proving abundantly rich in mineral deposits. This Region comprises almost the entire continental portion of Canada lying north of a line starting on the eastern coast opposite Newfoundland and following the northern boundary of the depressed area occupied by the St. Lawrence River, westward to Lake Ontario. From this point the line runs westerly to Georgian Bay, then skirts the north shore of Lake Huron and, entering the United States, sweeps around the ancient depressed area occupied by Lake Superior to re-enter Canada at Lake of the Woods; from this point it runs northwesterly to skirt the eastern shore of Lake Winnipeg. From Lake Winnipeg the line bears northwest to the western end of Lake Athabaska and passes through the basins of the Great Slave and Great Bear Lakes, reaching the Arctic Ocean to the east of the Mackenzie River delta.

The Shield contains in the basins and waters of its main rivers, innumerable natural storage reservoirs and outstanding water-power sites. It is estimated that the water-power resources of the Shield aggregate almost 20,000,000 h.p., warranting a total turbine installation of probably 26,000,000 h.p. At the present time the installed capacity of water-power plants throughout the area totals 4,730,000 h.p., or about 18 p.c. of the available resources. In the westerly portion of the Shield the Churchill and Nelson Rivers, in addition to waters from the Shield itself, receive drainage from the Interior Plains and the Cordilleran slopes of British Columbia, and in northern Saskatchewan and Manitoba have a power capacity of between 3,000,000 and 4,000,000 h.p. The Winnipeg River has a potential capacity of more than 1,000,000 h.p. and a present installation of 450,000 h.p. Easterly, the Shield is the source of the basic hydro-power for the development of the great mineral and timber wealth of northern Ontario and Quebec, including the 3,400,000 h.p. of the Albany, Mattagami, Abitibi, Harricanaw, Nottaway and other rivers flowing into Hudson Bay and of the 210,000 h.p. of the Kaminstikwia and Nipigon Rivers.

\* The Hudson Bay Lowland skirting the south shore of Hudson Bay is, for the purposes of this article, included in this Region.