

CHAPTER XIII.—POWER GENERATION AND UTILIZATION IN CANADA*

CONSPECTUS

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In this chapter of the Year Book all information respecting power generation and utilization in Canada is co-ordinated; some sections, however, cannot be regarded as complete owing to the insufficiency of available data.

Section 1.—Water Power

The fresh-water area of Canada is officially estimated at 228,307 square miles, an area nearly twice as large as the whole land area of the British Isles, and certainly larger than the fresh-water area of any other country in the world. Many parts of this well-watered country are situated at considerable heights above sea-level, and are therefore great sources of potential energy. Water power is among the chief natural resources of Canada, and its development has, in recent years, contributed materially to swell the volume of Canadian production.

Subsection 1.—The Water-Power Resources of Canada and Their Utilization

An extended article covering Canada's water-power resources, comparison of such resources with those of other countries, problems in the development of hydraulic and of hydro-electric power and the merchandising of power is given at pp. 353-364 of the 1940 Canada Year Book.

In considering the relative importance of different natural resources, the inherent quality of inexhaustibility by use that water power possesses places it in a unique position. Another significant feature, as affecting Canada, is the fortunate occurrence of large water-power resources in what has been termed "the acute fuel zone" where native coal is not conveniently or economically available. The Provinces of Ontario and Quebec, without native coal, include the principal centres of population and manufacturing, and abound in many raw materials of industry; they contain 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.

* Section 1 of this chapter has been revised under the direction of V. Meek, Controller, Dominion Water and Power Bureau, Surveys and Engineering Branch, Department of Mines and Resources, and Sections 2, 3 and 4 (except as otherwise stated) by G. S. Wrong, B.Sc., Chief, Transportation and Public Utilities Branch, Dominion Bureau of Statistics.