

It may be noted that central electric station classification totalling 9,349,904 h.p. represents more than 90 p.c. of the total developed water power as of Dec. 31, 1946. In 1900 the corresponding percentage was 33.5, thus showing the tremendous growth in the central electric station industry since the inception of successful long-distance transmission of electricity. Central stations produce 98 p.c. of all electricity sold in or exported from Canada.

The pulp and paper turbine installation total of 633,441 h.p. shown in Table 3 includes only water power *actually developed* and directly used by pulp and paper companies. In addition, this industry is the greatest purchaser of central station power, buying about 50 p.c. of all power sold for industrial purposes. Part of the purchased power is classed as secondary, being used for steam generation by electric boilers which have a capacity of more than 1,750,000 h.p. The motor installations for the use of primary purchased power aggregate approximately 1,370,000 h.p.

The "other industries" group of Table 3, column 3, develops a total of 328,778 h.p. solely for their own use. These diversified industries also provide a broad market for the power sold by the central electric stations.

The figure of total hydraulic installation in Canada, 10,312,123 h.p. is the cumulative total of installation for all water wheels and hydraulic turbines. It has been adjusted to Dec. 31, 1946, by the addition of any installations made during the year even though this equipment may not be in use; adjustments are also made covering turbines or water wheels that have been removed. Somewhat similar figures are reported by the annual Census of Industry but they differ slightly since they are compiled on a different basis; they represent only the sum of the installations in the plants actually in operation during the year being reported by the Census, not total installation; also census data are usually not available until some time after the end of the period.

Additional information regarding Canada's water-power resources is included in the 1940 Canada Year Book, pp. 353-364. Comparison is made with the resources of other countries and an extensive review is given of problems connected with the development, distribution and merchandising of power in Canada.

Subsection 4.—Progress in Hydro-Electric Development

During 1946, the water-power industry made very good progress in the transition from wartime to normal peacetime service, notwithstanding certain dislocations such as those caused by the drop in production of aluminum which had absorbed large quantities of power during the war years. Shortages of material and labour delayed the development of uses for secondary power and of various planned post-war extensions of service including the provision of power to farms and rural communities. However, although the demand for primary power fell slightly, total production of electric energy showed a rising trend.

To provide for the anticipated normal post-war growth demand in various districts, a number of hydraulic undertakings were under active construction during 1946. The more extensive projects are located in Ontario and British Columbia but the program also included new construction in the Northwest Territories, Alberta, Manitoba and Quebec.

The Hydro-Electric Power Commission of Ontario had three large installations under construction; at DeCew Falls near St. Catharines work was continued on the addition of a new 70,000-h.p. unit to the plant and on other incidental works;