

# CHAPTER XV.—ELECTRIC POWER\*

## CONSPECTUS

	PAGE		PAGE
SECTION 1. ELECTRIC POWER DEVELOPMENT.	642	SECTION 2. PROGRESS IN CONSTRUCTION OF GENERATING FACILITIES, 1964.....	652
Subsection 1. Historical and Current Trends in Power Development.....	642	SECTION 3. POWER GENERATING CAPABILITY AND LOAD REQUIREMENTS.....	655
Subsection 2. Utilization of Power.....	645	SECTION 4. ELECTRIC POWER STATISTICS.....	658
Subsection 3. Water Power Resources, Un-developed and Developed.....	646	SECTION 5. PUBLIC OWNERSHIP AND REGULATION OF ELECTRICAL UTILITIES.....	663
Subsection 4. Thermal Power Generation...	650		

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

## Section 1.—Electric Power Development

### Subsection 1.—Historical and Current Trends in Power Development

Electric power development in Canada has undergone remarkable and sustained growth since the beginning of the century. From a modest 133,000 kw. of generating capacity installed at the end of 1900, Canada's installed hydro capacity rose to over 20,300,000 kw. by the end of 1964, and thermal capacity to almost 7,000,000 kw.

The chart on p. 643 shows the expansion in installed generating capacity in hydro and thermal stations that has taken place in the past fifty years. Thermal-electric power development in Canada was not well documented early in the century but it is apparent that its growth was slow and of relatively minor importance until the late 1940's. The rate of development of hydro facilities, on the other hand, tended to accelerate after the turn of the century when improvements in electric power transmission techniques were introduced and increasing emphasis began to be placed on the construction of large hydro-electric stations.

During the prosperous 1920's, demand for electricity became heavier and the rate of installation increased appreciably. Then, under the depressed conditions of the early 1930's, power demand dropped off but did not show up immediately as a drop in the installation rate because of the time lag inherent in hydro-electric power development. The completion of hydro projects initiated prior to the depression period accounted for the continuation of a high rate of capacity installation up until 1935; thereafter, poor economic conditions in the 1935-39 period resulted in a reduced rate.

In the early war years, the tremendous demand for power to drive Canada's war industries accounted for the sharp rise in installation of new generating facilities between 1940 and 1943 but in the later war years construction dropped off so that, from 1944 to 1947, a second flattening occurred in the growth curve. After the War, industrial expansion and rapidly growing residential and agricultural development placed extremely heavy demands on power generating facilities, to stay abreast of which the addition of new

\* Sections 1 and 2 of this Chapter were prepared by the Water Resources Branch, Department of Northern Affairs and National Resources, Ottawa; Sections 3 and 4 were revised by the Energy Statistics Section, Industry Division, Dominion Bureau of Statistics; and Section 5 by the various provincial Commissions concerned.