

The availability of large amounts of low-cost hydro-electric energy has been an essential factor in the development of Canadian industry. Power from hydro-electric plants ranging in capacity from a few hundred horsepower to more than a million horsepower is carried via transmission line networks to urban centres and rural districts. The ability to transmit power over relatively long distances has facilitated the decentralization of industry and has enabled manufacturers to carry on operations in many of the smaller centres of population.

Table 3 indicates the respective amounts of water power developed by utilities and by industrial establishments. For the purposes of this tabulation, utilities are defined as companies, municipalities or individuals who sell most of the power they develop. In some cases, they include also certain subsidiary companies whose main purpose is to develop and sell power to a parent company for industrial purposes. The total of 20,597,193 hp. of turbine capacity installed in plants operated by utilities on Jan. 1, 1962 represented 77 p.c. of Canada's total installed capacity.

Industrial establishments are defined as companies or individuals who develop power mainly for their own use. The total installed capacity of plants operated by industrial establishments on Jan. 1, 1962 was 6,090,901 hp. In addition to the power generated in industrial plants, industry purchases a considerable amount from utilities.

The total hydraulic installation at the beginning of 1962 (26,688,094 hp.) was the total of all existing installations of water wheels and hydraulic turbines in Canada irrespective of whether or not the equipment was in use.

3.—Installed Water Power Capacity, by Province, as at Jan. 1, 1962

Province or Territory	Turbine Installation		Total ³
	Utilities ¹	Industries ²	
	hp.	hp.	hp.
Newfoundland.....	270,305	113,720	384,025
Prince Edward Island.....	240	1,420	1,660
Nova Scotia.....	189,345	15,193	204,538
New Brunswick.....	227,940	26,318	254,258
Quebec.....	8,919,678	3,657,167	12,576,845
Ontario.....	7,516,110	443,402	7,959,512
Manitoba.....	973,000	15,900	988,900
Saskatchewan.....	125,500	16,635	142,135
Alberta.....	413,390	1,065	414,455
British Columbia.....	1,920,945	1,780,381	3,701,326
Yukon and Northwest Territories.....	40,740	19,700	60,440
Canada.....	20,597,193	6,090,901	26,688,094
Percentage of total installation.....	77	23	100

¹ Includes only hydro-electric installations that develop power mainly for sale.

² Includes only water power installations developed by industries mainly for their own use.

³ Includes installed capacity of all water wheels and hydraulic turbines.

Section 2.—Power Generating Capability and Load Requirements*

Power generating *capability*, as covered in this Section, is the measurement of the available generating resources of all hydro and thermal facilities at the time of the one-hour firm peak load for each reporting company, and is not equal to the *capacity* of such generating facilities. For example, a hydro plant may have a capacity of 100,000 kw. but if, at the time of peak-load, the water available for generation is only 80 p.c. of the plant capacity requirements, then its capability is 80,000 kw.

Total generating capability has grown at a rapid rate since 1950. The annual rate of increase was 9.2 p.c. in the ten-year period 1951-60 and 8.4 p.c. in the period 1958-61. In comparison, the forecast rate of growth for the years 1962-65 is only 5.8 p.c.; thermal

* Prepared by the Public Utilities Section, Public Finance and Transportation Division, Dominion Bureau of Statistics.