**1.—Available and Developed Water Power, by Province, as at Jan. 1, 1964**

| Province or Territory | Available 24-Hour Power at 80 p.c. Efficiency | | Turbine Installation |
|---|---|---|---|
| | At Ordinary Minimum Flow | At Ordinary Six-Month Flow | |
| | hp. | hp. | hp. |
| Newfoundland | 1,608,000 | 3,264,000 | 632,025 |
| Prince Edward Island | 500 | 3,000 | 1,660 |
| Nova Scotia | 30,500 | 177,000 | 204,538 |
| New Brunswick | 123,000 | 334,000 | 309,726 |
| Quebec | 12,557,000 | 23,711,000 | 13,176,845 |
| Ontario | 5,496,000 | 7,701,000 | 8,247,512 |
| Manitoba | 4,758,000 | 8,454,000 | 988,900 |
| Saskatchewan | 552,000 | 1,131,000 | 326,135 |
| Alberta | 911,000 | 2,453,000 | 414,455 |
| British Columbia | 18,200,000[1] | 19,400,000[1] | 3,831,326 |
| Yukon Territory | 5,859,000[1] | 5,866,000[1] | 38,190 |
| Northwest Territories | 1,367,000 | 1,791,000 | 22,250 |
| **Canada** | **51,462,000** | **74,285,000** | **28,193,562** |

[1]Reflects the effect of possible stream-flow regulation based on known storage potentials.

The figures in the first and second columns of Table 1 represent continuous 24-hour power based on available data on stream-flow and hydraulic head at individual sites. The hydraulic head used is the feasible concentration of head, which has been measured or at least estimated at existing falls, rapids and known power sites. No consideration has been given to possible economic concentrations of head on rivers and streams of gradual gradient, except at those locations where the available head has been definitely established by field investigations.

It should be emphasized that the figures of available power represent only the minimum water power possibilities of Canada. Many unrecorded power sites exist on rivers and streams throughout the country, particularly in the less-explored northerly districts. As power surveys are extended, detailed information on new sites will become available and, undoubtedly, substantial additions to present figures of available power will result. With the exception of British Columbia, Yukon Territory and the Northwest Territories, estimates of available power are based upon existing river flows and do not take into account the benefits of stream-flow regulation that would result from the development of storage potential. In addition, the figures of available power do not include the power potential of major river diversions that have been investigated but not developed.

The figures in the third column of Table 1 are the totals of plant capacities based upon the manufacturer's rating as indicated on the name-plate of each unit. In a few cases where, subsequent to installation of the unit, a change in the normal operating head has been effected, a rating based on the new normal operating head is used. The maximum economic turbine installation at any power site can be determined only by careful consideration of all the conditions and circumstances pertinent to its individual development. It is the usual practice, however, to install turbines with a total capacity in excess of the power equivalent of the ordinary six-month flow at the site. This additional capacity may be installed for use at peak-load hours or to facilitate plant or system maintenance, or to take advantage of high river flow.

The extent to which the installed capacity exceeds the power equivalent of the ordinary six-month flow depends upon the factors that govern the system of power-plant operation, and varies widely in different parts of the country. In some developments, the difference may amount to as much as several hundred per cent. For this reason, the figures in the third column of Table 1 are not directly comparable with those in column two. For the same reason, it is not feasible to forecast future capacity installation on the basis of estimates of available water power.

The steady growth of hydraulic turbine capacity is shown in Table 2. The average annual growth of 56,000 hp. in the period 1900-05 increased sharply to about 150,000 hp.