

Subsection 5.—Power and Fuel.

Power.—The power equipment installed in manufacturing establishments is a very good barometer of the industrial development of Canada, inasmuch as the production is increasingly dependent on the power equipment. Increases and decreases in productive capacity, measured in horse-power, are not the result of temporary fluctuations in costs and values in the same manner as capital investments, values of products, etc. Power equipment will not reflect temporary depressions, but over a period of several years will indicate industrial growth or decline.

Central electric stations, which generate electricity for both lighting and power purposes, are treated in Table 32, separately from the other groups of industries. Internal combustion engines include all gasoline engines, gas engines (natural, coal and producer gas), and diesel and semi-diesel or other engines which produce power by burning the fuel in the cylinder.

The rapid increase in the development of power in Canada and in its utilization in manufacturing industries is illustrated by the summary figures for the years 1921 to 1934 in Table 32. The table is divided into two parts, the first showing manufacturing industries exclusive of central electric stations and the second showing central electric stations only. The abundance of readily available water power in many parts of Canada facilitating the development of low-cost hydro-electric power has, no doubt, played a large part in this rapid growth. Of the total increase in power equipment since 1923, amounting to 6,585,968 h.p., inclusive of central electric stations, no less than 4,288,623 h.p., or 65 p.c., was in water power. However, some sections of Canada are not so well provided with water-power resources and chiefly in such sections primary power derived from steam engines and turbines and internal combustion engines has also increased rapidly during the period covered. In the provinces of Prince Edward Island, Nova Scotia, Saskatchewan, and Alberta, primary power produced from fuels exceeded that from water in 1934. The total installation of electric motors increased 2,014,585 h.p., or 153 p.c., in the 12 years covered, by far the greatest part of this increase being in motors operated by power purchased from central electric stations.

Comparisons with the data for 1923 show an increase in 1934 of 6,585,968 h.p., or 140 p.c., in the total power equipment in all manufacturing establishments, including central electric stations, by far the largest increase, amounting to 4,488,175 h.p., being in central electric stations. Of this increase in central electric stations, water-power development accounted for 4,278,127 h.p., while steam power installed increased by 190,463 h.p. and internal combustion engines increased by 19,585 h.p. Provinces with large water-power developments show the greatest increases in primary power, *i.e.*, steam engines and turbines, internal combustion engines and hydraulic turbines or water wheels. For all manufacturing industries, including central electric stations, the province of Quebec led with an increase of 2,451,575 h.p. during the period under review. Ontario came second with an increase of 1,012,551 h.p., British Columbia third with an increase of 465,576 h.p., Manitoba fourth with 371,626 h.p., Nova Scotia fifth with 170,795 h.p., New Brunswick sixth with 128,915 h.p., etc. In the utilization of hydraulic power, Quebec exceeded Ontario for the first time in 1925. In 1927 Quebec exceeded Ontario or any other province in the total of installed primary power from all sources and has been the leading province since then, largely owing to its extensive water-power resources, 94 p.c. of its primary power in 1934 being derived from water.