

### PART III.—ELECTRIC RAILWAYS.\*

The cheap and reasonably rapid conveyance of human beings is a necessity of modern urban life. One important means by which this necessity is supplied throughout Canada is the electric street railway, generally operated by hydro-electric energy.

**Historical.**—Replacing the horse-car systems, used in Montreal and Toronto as early as 1861, electric street railways were first seen in operation in Canada in 1885, when a successful experimental railway was constructed and operated at the Toronto Exhibition grounds. Before many years their safety and convenience resulted in the discarding of the older systems. An electric system 7 miles in length was opened at St. Catharines in 1887, using the double overhead trolley. The second electric railway in Canada commenced operations in Vancouver, in June, 1890. This was followed by the completion of the Ottawa Electric Railway in 1891, and the electrification of the Montreal and Toronto systems in 1892. The street railways of other eastern cities were generally electrified during the 1890's, while in the newer western cities electricity was used from the commencement. In the cities of Eastern Canada, electric street railways are generally operated by private companies under city franchises, while in a considerable number of cities in Ontario and the West the street railways are owned and operated by the municipalities, a fact indicated in Table 28.

Many difficulties are met in operating the cars during the winter season, owing to snow. This, however, has been overcome by the use of sweepers, scrapers and ploughs. The single overhead trolley system has been found the most suitable and is in general use. During the past few years an increasing number of motor buses have been used; in 1924 only 48 were operated, but by 1934 the number had increased to 537.

In addition to street railways in the cities there are several systems serving suburban areas and also doing an interurban business, but this latter class of service is fast being supplanted by motor bus service.

**Development of Electric Railway Traffic.**—Figures for the year 1893 show that 30 companies, with a paid-up capital of about \$9,000,000, operated 256 miles of railway. By 1897, 35 companies made returns showing 583 miles of track, 1,156 cars, 26,431,017 miles run, 83,811,306 passengers carried and capital of \$18,727,355. In 1904, 44 companies showed 766 miles of track, 2,373 passenger cars, 42,066,124 car miles run, 181,689,998 passengers and capital of \$50,399,188.

Summary statistics of the operation of electric railways in Canada from 1911 to 1934 inclusive are given by years in Table 25. It may be noted in this table that the carriage of freight reached its maximum in 1928, with 3,888,672 tons, the number of fare passengers carried in 1929 reached a record of 833,496,866, while the mileage of track has been declining since 1925. In Table 26 statistics of mileage and equipment are given for the latest four calendar years, and statistics of the capital liability of electric railways are furnished for the years 1908-34 in Table 27. Detailed figures of the mileage operated, the capital liability, the earnings, operating expenses, passengers carried, employees and salaries and wages, are given for 1934 in Table 28, while Table 29 shows by years from 1919 to 1934 the number of passengers, employees and others killed and injured on electric railways in Canada.

\* Revised and checked by G. S. Wrong, B.Sc., Chief of the Transportation and Public Utilities Branch of the Dominion Bureau of Statistics. This Branch publishes an annual report on Electric Railways in Canada.