

the associated municipalities. The contracts between the Commission and the municipalities called for repayment to the Government in thirty years.

When a municipality wishes to become part of the Hydro system an engineer of the Commission reports on the cost of connection with the existing transmission lines. Then the question of joining the Hydro is voted upon under a civic by-law, which, if passed, is followed by another giving the necessary money. The local distribution system is financed by an issue of municipal debenture bonds to be retired in twenty years. Monthly bills are sent by the Commission to the municipalities, based upon an approximation to the yearly expense incurred in supplying power to the municipality, and at the year's end a thirteenth statement is sent which brings the approximation to a true account. Like any efficient business concern, the Commission makes provision from the charges for power for sinking funds, repairs and replacements.

The Commission had been given authority to generate its own power, but chose rather to contract for power from the Ontario Power Company at \$9.40 for the first 25,000 h.p. and \$9.00 for any in addition up to 100,000 h.p. In 1916 power was purchased from the Canadian Niagara Power Company as well, and in the following year the Ontario Power Company was acquired through purchase of practically all the stock. It was at this time that the Queenston-Chippawa development was begun. Of the total drop of 327 feet between Lake Erie and Lake Ontario, the Ontario Power Company used only 180 feet at Niagara Falls; the Queenston-Chippawa development takes water through a power canal from the Welland river a distance of $12\frac{1}{2}$ miles to Queenston, where the generating plant operates under a net head of 305 feet. Thus for the same diversion of water the Queenston-Chippawa development generates 29.4 h.p. to every 14.6 h.p. generated by the Ontario Power Company.

The Queenston-Chippawa development was begun in 1917 as a war measure when the consumption of power in munition factories was greatest, at a time when the duration of the war could not be foreseen. High wage costs and high prices of material placed construction costs far above the original estimate of \$10,500,000, besides which the ultimate capacity of the plant was enlarged. The cost of completing the first five units totalling 275,000 h.p. is now estimated at approximately \$60,000,000.

The growth of the Hydro system in Ontario is shown in the amount of power used by its customers. In 1910, the Commission supplied 750 h.p. to 10 municipalities; in 1915, 100,242 h.p. to 99 municipalities; in December 1921, 242,349 h.p. was distributed, 81.7 p.c. of which was supplied to the Niagara district. "The government electric utilities in Ontario have grown from a league of seven municipalities formed in 1903 until now the vested interests of the people in this class of property are represented by investments totalling nearly \$200,000,000, the bonded indebtedness of which is guaranteed by the Province of Ontario".