



This diagram shows the Southern 'island' of 25-cycle power surrounded on all sides by 60-cycle areas. This highly industrialized area, as described in the text, is now being converted to 60-cycle frequency by the Ontario Hydro-Electric Commission.

Detroit River. It was an apt description. The Commission's own Georgian Bay Division to the north and its Eastern Ontario Division to the east, with Quebec just beyond, are 60-cycle areas. To the south lies New York State, in which, after many experiments, 60-cycle power predominates. To the west, across the Detroit River from Windsor, the millions of consumers in Michigan are provided with electrical services at the 60-cycle frequency.

In 1917 the Commission acquired the 160,000 h.p. generating station of the Ontario Power Company at Niagara and in 1922 took over its companion development, the 145,000 h.p. station of the Toronto Power Company. Both these stations were generating power at 25 cycles and before their purchase the question had arisen as to what frequency should be installed at the Commission's new 500,000 h.p. Queenston development.

The decision to bring in Queenston at 25 cycles was made because it was considered impossible to carry out a satisfactory change-over program at the time. Unless the other stations at Niagara were brought into line and a practically complete consumer standardization effected, the installation of 60-cycle generation at Queenston would, it was felt, create conflicting zones of different frequencies in the same power division—a formidable barrier to power distribution. Engaged in a costly new power development, and with other important projects in the blue-print stage, the Commission was not in a position to undertake the extensive program demanded and there was no guarantee that it would be able to do so at an approximate future period.