

The poles are galvanised steel angle iron towers, spaced at a distance of 550 feet, and on curves of 100 feet. The towers are fixed in the ground by means of framed steel anchored six feet below the surface. The height of the towers is sixty-five feet, except over the Welland Canal, where one hundred and fifty feet clearance was allowed for the passage of vessels. The insulators are of the disk suspension type, five disks being employed for each conductor, which is of stranded aluminum wire. On the highest point of the towers is arranged a grounded cable for lightning protection.

Numerous legal actions, which have hindered the operations of the Commission, have been gradually cleared out of the way sufficiently to allow the successful completion of this great project.

In laying out their lines, the engineers have paralleled the roadways as much as possible, and all the crossways are protected by mesh construction. The towers used in this work are of light, but substantial, design. They were thoroughly tested before being finally adopted by the Commission. The normal span between towers on the level is 550 feet. The whole tower line is about 276 miles long, and approximately 3,000 towers were required for the work of construction. At the end of the Toronto line difficulty was met in obtaining a right-of-way into the city, and, as a result, the engineers were forced to erect twenty towers along the waterfront, and these were placed on massive concrete piers.

To provide insulators for the 110,000-volt line was no small task. Tenders were called for and manufacturers were asked to meet the most rigid specifications. The suspension type of insulator was adopted, and these were required to withstand a dry potential test of 330,000 volts and a wet test of 220,000 volts, with one-half inch of rain a minute at a 45-

degree angle, toward the insulator. The strain insulators, transpositions and long spans were compelled to stand a strain of 10,000 pounds without breaking.

The test showed unmistakably that power would be safely transmitted at the high voltage, which was 55,000 volts higher than the regular 110,000 volts pressure of the line when in continuous operation by the Commission. This test indicated that power could be transmitted and supplied to the various municipalities at a price much lower than was furnished in the estimate made by the Commission some years ago.

The work of the Hydro-Electric Power Commission of Ontario extends over a wide area. The completion of the lines in Western Ontario will soon be an accomplished fact. Other parts of the Province are, however, clamouring for the Commission's supervision of water-powers. Already the Hydraulic Department has estimated the water-power resources of the Province. Storage areas have been surveyed and reported on, and in the case of Dog Lake, situated in the northern part of the Province, plans for an increased storage capacity have been drawn for the Department of Public Works and construction work placed under way. In the East, Ottawa, the Canadian capital, is securing a power supply at a comparatively low rate through the interests of the Commission, while many other towns are making application for similar service.

In a recent address the Honourable Adam Beck, Chairman of the Hydro-Electric Commission, announced that the Commission would supply Hydro power at cost to every community that wanted it. He said that the Commission would, in supplying the smaller consumers, operate on the same principle as the municipal telephone system. Whenever twenty farmers went to a county council and requested the erection of a distribution