

finned to water-powers of small dimensions, and the service must be given in the immediate neighbourhood of the water-power.

Quite recently, however, the transmission of electricity for considerable distances has been fully demonstrated to be feasible and economically important, and at once it became evident that water-powers had assumed an increased market value by reason of the facility with which the power of water could be devoted to the generation of electrical energy, which energy could then be carried without serious loss or prohibitive expense, and in greater or less quantities to power markets and centres of population.

With the preceding statements postulated the natural question arises to what extent are we blessed with water-powers over this coalless area, and how convenient are they to centres of population? Also, what has been accomplished to the present, and what is the future outlook?

If we study a map of Canada we find the area before referred to, to consist, broadly speaking, of two drainage areas: one tributary to the Hudson Sea and the other to the St. Lawrence Valley, the population of the country being chiefly centred in the latter area. Doubtless the Saskatchewan and Winnipeg Rivers will soon become important from a power point of view; the former because of its relation to wheat grinding, the latter because of its nearness to Winnipeg; but looking at the St. Lawrence water-shed, one is at once impressed by the great number of large rivers, flowing Southward from the Height of Land, which all have excellent water-powers, and which, flowing as they do from a wilderness, full of swamps and lakes, are admirably uniform in their run-off, and liable to remain undisturbed for some time to come. The development of these powers is at present chiefly along the lines of milling and grinding, and only where situated near centres of population, such as Ottawa or Montreal, are they devoted to the generating of electricity.

Coming, however, to the rivers of that portion of Ontario South of the Ottawa River, and of Quebec South of the St. Lawrence River, a different and much less satisfactory condition prevails; and although in earlier generations, these rivers may have been quite steady in their flow, this is, with two or three exceptions, not now the case, owing to the great amount of cleared land and consequent rapid run-off of the flood waters, as soon as the spring thaws have taken place.

Before coming to the main subject of this paper, which is the relation between forestry and water-powers, it may be interesting to dwell for a moment on the financial magnitude of the question under discussion. At the present time there has been developed in Canada about 350,000 H.P. of water-power, which probably, including transmission lines, represents an investment