

Water Powers of Canada

Estimates have been made by the writer as the result of careful exploration work within reasonable distance of the cities of Vancouver and Victoria there are possibilities of the economic development of water powers aggregating 750,000 H.P. These water powers are all situated within an area of 20,000 square miles, thus representing 37½ H.P. for each square mile of territory. Outside of this area a rough estimate of the water possibilities of the Province would bring this figure up to 3,000,000 H.P., or nearly equal to the estimate for Ontario, and in the writer's opinion this amount is conservative, although until much further investigations have been made, such an estimate is merely an intelligent guess.

The capitalist and manufacturer seeking for opportunities of developing new industries will find a fertile field in British Columbia for utilizing these water powers in addition to their use in supplying electrical energy for cities and towns. Already large Portland cement plants using about 8,000 H.P. of electrical energy are in operation on Vancouver Island, paper pulp is being manufactured on a large scale, and smelting plants are being operated by water-powers.

In view of the value of these water-powers it might be useful to refer to some of the more important uses to which they may be applied.

In the field of pulp manufacture, Canada is a great paper making country, and the following figures indicate to what extent:—

	Tons per Annum	Value	24 hour Horse Power required
Mechanical Pulp	800,000	\$12,400,000	210,000
Chemical pulp	272,000	10,336,000	7,500
News paper	480,000	18,240,000	20,000
Total	1,552,000	40,976,000	237,500

Of that output British Columbia at the present time produces in value about 80 per cent. Bearing in mind the vast forests in the Province, and in many places the existence of large water powers in close proximity to unlimited areas of spruce, hemlock and balsam fir from which the fibre is produced, that industry alone is an inviting one. It is, however, in the field of electric-chemistry that some of the greatest opportunities are offered, but in the electro-chemical industries it must be borne in mind that the construction of hydro-electric plants must be carried out, so as to produce electrical energy as economically as is done in the large plants in Norway, Sweden, and Switzerland. In British Columbia, however, there are in many of the water-powers somewhat similar conditions to those that obtain in Scandinavian territory, i.e., powers that can be developed economically under high head. In the writer's opinion, excluding the cost of transmission lines, many of these including some low head plants, can be developed as complete installations from \$60 to \$100 per