

we need for building and other purposes, enable us to export every year several million dollars' worth.

Mr. Speaker, in 1918—I am speaking of the province of Quebec only—we had already eighty-one pulp factories, of which 31 were manufacturing pulp and paper, 26, paper only, and 24 paper and pulp combined. It is interesting for us to note that in this industry which is but a few years old, there is nearly \$190,000,000 invested, and 23,000 workers are depending upon it.

These figures speak for themselves, and then we must consider that this industry which is but beginning has for its supply inexhaustible forests which are waiting for the woodcutter's axe to ring out the joyous jingle of silver. I spoke of our forests being inexhaustible. For instance if you take an average of five cords of wood per acre, and in view of the fact that two cords of wood yield a ton of pulp, the district of Lake St. John alone could supply one million tons of pulp every year during 50 years. Moreover, if you consider that it takes 25 to 30 years for spruce and balsam to develop, the conclusion is that, in spite of fires which might occur, the district of Lake St. John alone could supply our factories indefinitely with one million tons of pulp every year. The same may be stated and with greater emphasis, I think, of the country bordering on the river St. Maurice and the north shore of the St. Lawrence. Not only do these districts supply us with the raw material, that is wood, but they also afford us the requisite power for its development.

We have in this country the most wonderful water powers of the continent and these have contributed to a great extent to the progress of our industries. You don't need a very observing mind to notice that all our great industries are located in harbours where they can get cheaper power and greater shipping facilities. Three Rivers is a striking example of these industrial settlements.

The city of Three Rivers which was completely destroyed by fire some twenty years ago, is destined to become one of the chief industrial centres of our Province on account of its harbour and the power supplied by the Shawinigan Water and Power Company, and if I thought it would not displease the hon. member from Three Rivers (Mr. Bureau), I might add: thanks also to the initiative of its representative in the House of Commons.

[Mr. Fafard.]

Our water powers are as inexhaustible as our forests.

Suffice it to say that the Provincial engineers estimate that the Lake St. John basin could supply 700,000 horse-power, and, without any thought of being offensive to the hon. member for Lake St. John, there are not a few points along the north shore of the St. Lawrence river, which can supply as much.

Inasmuch as I am speaking of the water-powers of the Province of Quebec I may be allowed to say a few words and to place on record a few data about the works carried out on the St. Maurice river, at the Loutre portage, with a view to modifying the conditions of this river's water-flow. The information I am now giving to the House has been taken from the report of the water courses commission, and the accuracy of the figure is unquestionable.

The St. Maurice is a tributary of the St. Lawrence river into which it empties itself from the North at Three Rivers; it is about 360 miles long and it has a drainage basin of 17,000 square miles.

The main water falls one meets going upstream are: les Forges, les Grès, Shawinigan, Grand'Mère, La-Tuque, The Rapide-Blanc, the Grand-Cœur and the Chaudières. Of these three are already in operation. They are: Shawinigan, Grand'Mère and La-Tuque.

It was in 1909 that the Quebec Government undertook to consider the scheme of regulating the water-flow of this river, and it was finally carried out in December 1917.

This dam is built at a distance of 220 miles from the hydro-electric plant of Shawinigan, forming a storage of 300 square miles in area with a capacity of 160 billion cubic feet of water. This extraordinary mass of water is restrained by a dam 1,626 feet long, having a minimum width of 20 feet and a maximum of 72 feet. The height of the top reaches 57 feet above the natural low water flow of the St. Maurice river, at that point, and 1,335 feet above the sea level.

The weir is 840 feet in length and it can allow a flow of 15,000 cubic feet of water per second for a three-foot wave.

Into the construction of that dam there entered: 71,751 cubic yards of concrete masonry and 720 tons of steel.

The water can flow from the reservoir through ten gates, known as bottom-sluiques. Every opening is rectangular measuring 12