

THE COMMERCIAL

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D. W. BUCHANAN,
Publisher.

The Commercial certainly enjoys a very much larger circulation among the business community of the vast region lying between Lake Superior and the Pacific Coast, than any other paper in Canada, daily or weekly. The Commercial also reaches the leading wholesale, commission, manufacturing and financial houses of Eastern Canada.

WINNIPEG, DECEMBER 17, 1898.

ASSINIBOINE RIVER WATER POWER.

Last week we referred at length to the action now being taken by the Dominion government to lower the level of Lake Manitoba, and the advantage it would be to have the cut made from the lake to the Assiniboine river, instead of increasing the outlet capacity at the northern end of the lake. Some years ago great interest was taken in the proposal to utilize the waterpower of the Assiniboine river at Winnipeg. A thorough investigation was made at the time and it was then considered that the work would prove of great advantage to the city. A complete survey of the proposed work was made by the city engineer, who estimated that a water power, at the lowest stage of the river in a dry year, could be developed of 3,219 horse-power. By making a cut from Lake Manitoba to the Assiniboine river it was estimated that the power could be increased to 15,000 horse-power per day of fourteen hours. In order to verify the finding of the city engineer, J. T. Fanning, an expert hydraulic engineer, was brought here from the United States, and in the main he fully endorsed the report of City Engineer Ruttan. There is set at rest any doubt as to the feasibility of the work, the approximate cost of the same, and the

value which the development of the power would be to the city.

Latterly, all attention seems to have been directed toward the improvement of navigation on the Red river, so much so that the development of the waterpower within the city limits has been almost forgotten. While it is very important that navigation should be opened on the Red river to Lake Winnipeg, in many respects the development of the Assiniboine river water power within the city limits, particularly in connection with the canal to Lake Manitoba, is of even greater importance.

It is estimated that at the present cost of fuel, steam power will cost in Winnipeg about \$90 per annum per horse power, or 29 cents per day for each working day in the year. This applies to steam power used on a large scale, for twenty-four hours steady running. Used in a small way the cost would be greater, ranging as high as \$300 or more per horsepower per year. After allowing very liberally for the cost of developing and maintaining the Assiniboine waterpower, the rental of only 2,500 horse power at an average of \$10 per year would pay an interest of 5 per cent on the outlay and cost of maintenance. The cost of construction is estimated for canals, dams, etc., of a capacity of 10,000 horse power. If the cost of the work were estimated on a basis of the minimum, low water power of something over 3,000 horse power, the percentage of interest would be much greater. But even at the outside estimate of cost of construction, we would have the cost of motive power in Winnipeg reduced from \$90 or more per horse power per annum to \$10 per horse power per annum, besides securing a liberal return by way of interest on the investment. What this reduction would mean in the direction of encouraging the location of factories here, is beyond comprehension. The present total steam capacity of the city is estimated at about 3,000 horse power, or something less than the minimum power which the Assiniboine river would furnish at lowest water, without the Lake Manitoba connection. This 3,000 horse power represents an expenditure estimated at an average cost of \$100 per horse power per year, of \$300,000 per annum. This 3,000 horse power if obtained from the Assiniboine river and rented at \$10 per annum, would represent an annual saving of \$270,000, after paying expenses of maintenance and allowing for a liberal interest on the first cost. As stated, this first cost is estimated on the work necessary to develop 10,000 horse power, though the river does not furnish this amount of power all the year around. Work required to develop the minimum

power would cost much less, and would therefore represent a much greater saving than is apparent on the present steam power capacity of the city.

It is also stated by competent authority that by carrying out this work, a portion of the water could be used for flushing the sewers of the city, on the principle of natural gravitation, and therefore without any cost of pumping. Now that the city is going in for municipal ownership of water works, electric lighting plant, etc., the great need of developing the water power should become more urgent. When the city has the new water works and the proposed electric lighting plant in operation, a maximum of about 800 horse power will be required. The saving on 800 horse power, by the development of the Assiniboine water power, would be \$64,000 per year, on the basis of \$10 per year per horse power for the water power. The actual saving should be considerably greater, as the charge for water power would allow a larger interest on investment than the city would have to pay for money, providing the work were done by the city.

This much has been said with reference to the Assiniboine water power at Winnipeg alone, without the Lake Manitoba connection. If the Dominion Government could be induced to make the cut from the lake to the Assiniboine river, instead of at Fairford, as shown in the map printed in The Commercial last week, the value of the water power at Winnipeg would be increased by almost the multiple of 5, as the horse power thus made available would be increased by about this proportion. It would, therefore seem worth while making a strong effort to induce the Dominion Government to bring the surplus water of Lake Manitoba this way. It would make possible the development of 15,000 horse power within the city limits of Winnipeg, and this would be of vastly more importance to the city than any other enterprise now in view, including the St. Andrew's rapids improvements.

In another article we shall deal with the great possibilities of commercial expansion and development by the opening of a canal to Lake Manitoba.

HEAVY EXPENDITURE PROPOSED.

On December 20 Winnipeg rate-payers will be asked to vote upon three debenture by-laws. One of these by-laws calls for the appropriation of \$20,000 for the purpose of erecting a free public library. Another asks for the sum of \$13,000 for the purpose of establishing a crematory for burning garbage. The third is to legalize an issue of debentures to the