

The St. Maurice River reservoir, which has lately been named the Gouin reservoir, is by far the largest of all. In fact it stores more water than is held by the Assuan dam built by the Imperial government on the Nile. So far it has permitted the commission to double the minimum flow of the St. Maurice, in accordance with its contract with the mill owners; and I have reason to believe that it will be possible to increase substantially this proportion.

The project cost about \$2,500,000, including various accessory works such as a hydro-electric plant capable of developing 1,000 h.p., a railroad 20 miles in length, etc. This reservoir is at present yielding a revenue of \$191,000 per annum just from the three companies now using it.

Storage Profitable for Province

After subtracting interest on the capital and an annuity for a sinking fund to redeem our bonds in 30 years, we had this year a net profit of about \$25,000. Bearing in mind that there are still many rapids and falls available on the river, and that several of them will likely be developed in the course of the next 10 to 15 years, it may be seen that the proposition is a good one both for the government and for the users of the water.

The method adopted to collect the revenue was based, after mature consideration, on the horse-power-year. This expression needs a word of explanation. The minimum flow occurs in the fall and again in the winter months. The reservoir is consequently closed some months in the year and only opened in times of drought. The water given out in those dry months is calculated as though it was evenly distributed throughout the year; by a simple calculation it may then be converted into horse-power according to the head at each power-house. Such is at present the policy of the government as regard water-power and storage reservoirs.

I have not referred at any length to the undeveloped water-powers of Quebec for the reason that I have treated the subject already in a little booklet entitled, "Water-Powers of the Province of Quebec," which was printed in 1917, by the Department of Lands and Forests of the Province of Quebec, and which will be mailed free to anybody applying for it.

Permit me to sum up the situation by saying that the province of Quebec is well provided with water-powers, as is well known, but that most of its falls are not of great height.

It should be especially observed that the sites where considerable energy (over 50,000 h.p.) can be produced, and which are still in a natural state, are remarkably situated for supplying the wants of the principal cities. Thus, for the vicinity of the city of Ottawa, we find the Chats Falls and other rapids of the Ottawa River; for Montreal, besides the sources of energy now in use, the rapids of the St. Lawrence at Coteau, Les Cèdres, and also the Sault-Saint-Louis, commonly called Lachine Rapids; for Trois-Rivières and Quebec, the water-powers of the River St. Maurice, regulated by the largest reservoir in Canada; for the Saguenay and Chicoutimi region, the rapids of the Grand-Décharge, the outlet of Lake St. John; and lastly, for Lower St. Lawrence, the falls of the Manicouagan and of the River Aux Outardes.

Wonderful Opportunities at Lake St. John

The south shore of the St. Lawrence is not so well provided, but it may be said that for the more densely populated regions, that is to say the Eastern Townships, the St. Francois River, which is regulated, will suffice for the demand for a good many years.

The advantages of the Lake St. John region and, particularly, those of the Grande-Décharge, should be especially emphasized. The natural conditions there are remarkable; the available undeveloped power is enormous; ocean navigation is possible almost as far as the site where the works would be erected; there is no lack of labor and a railway, as well as a steamer line, connects the district with Quebec and Montreal.

The Quebec Streams Commission, acting under the jurisdiction of the provincial government, has taken in hand the improving of the regimen of rivers on which industries are established. Great advantages are anticipated from this

policy, and everything tends to show that within the next decade the work of this body will produce all the good results expected from it.

The question of public ownership is very much to the fore these days. I do not think, however, that it is within my jurisdiction to discuss this matter here, although I may say that the Quebec government has already made grants to a certain municipality on the general policies outlined above. So far as I know, this has been found satisfactory to the people of the town concerned, and no other special favor has been asked. I would be pleased to furnish anyone privately with any further details that might be desired, concerning the water-power situation in the province of Quebec.

Letter to the Editor

PROF. BLANCHARD'S APPOINTMENT

Sir,—I wish to advise your readers of the action of the Board of Regents of the University of Michigan in the matter of reorganization of the work in highway engineering at Michigan University.

At the last meeting of the board, the professorship of highway engineering was created and filled by the appointment of Prof. Arthur H. Blanchard, late of Columbia University. Prof. Blanchard is so widely known as a teacher and engineer in matters of highways and highway transport, that I need say nothing as to his qualifications.

Funds were also provided for the appointment of an assistant professor of highway engineering who will have charge of the highway laboratory and courses in design, laboratory and field work. This position will be filled by the appointment of John H. Bateman, a graduate of the University of Michigan, and for the past four years assistant engineer and engineer of the Michigan State Highway Commission.

The regents have made liberal appropriations for equipment, current expense and for the salaries of clerical and laboratory assistants.

The University of Michigan four years ago commenced to develop work in highway engineering, and the work in the university and the laboratories has been built up to a good state of efficiency under Prof. John J. Cox, who recently resigned to devote his whole time to construction work.

A large program of work under Prof. Blanchard will include the continuation of all work formerly given undergraduate students in highway engineering, together with one or two new courses, the addition of courses in highway transport and highway economics, the development of graduate work during the regular collegiate year, and the continuation of the highway short course which has been given at Michigan University for the past five years.

In addition to this work, special courses for graduate practising engineers, leading to the master of science degree in engineering, will be given during the winter months. These courses will be given intensively so that engineers who can only take a few months away from their practice may take the work and secure credit towards the degree.

It is the intention and desire of the authorities of the University of Michigan to give the most ample support to the work in highway engineering as being a subject which demands attention at the present time.

HENRY E. RIGGS,

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Ann Arbor, Mich., August 13th, 1919.

The Rust Engineering Co., of Pittsburgh, Pa., have been awarded contract for a radial brick chimney for the Ames-Holden Tire Co.'s plant at Kitchener, Ont.; also contract for four chimneys for the Imperial Oil Co.'s refinery at Dartmouth, N.S.