DIVERSION OF WATER FOR POWER PURPOSES AT NIAGARA FALLS.

THE power situation at Niagara Falls is dealt with at considerable length in the recently issued report for 1914 of the Queen Victoria Niagara Falls Park Commission. The reference supplements an extensive review of the subject, which appeared in the report of the Commissioners for 1911, and adequately discusses the general trend during the past few years of the power development at Niagara. The following notes are reproduced:—

It will be remembered that for many decades the principal thought of scientists and captains of industry centered around the possibility of producing power for industrial use. Then the concentration of engineering skill not only announced the feasibility of the project, but financial interests became convinced of the practicability of engineers' theories and resolved to risk capital in the venture. A period ensued when all discussions centered about the development and what it had in store, not only for the cities of Niagara Falls in Ontario and the State of New York, but the districts at a distance, if long distance transmission of electrical energy could only be accomplished. With the wearing away of the novelty of huge hydro-electric installations, larger than had been attempted in any part of the world before, public sentiment, always slow to assert itself, was gradually seized with the thought that the aesthetic features of Niagara Falls were very intimately bound up with this ingenious scheme of the designers and builders to turn one of nature's masterpieces to the benefit of the utilitarian requirements of man. And while the general sentiment was doubtless lax in failing to realize the interconnection between commercial and aesthetic features in the first instance, there is no doubt but that it was over-zealous in seeking to protect Niagara as a spectacle when this side of the question was grasped. Then followed the immense popular outcry with its thousands of letters from all parts of the North American continent to the Federal Governments at Washington and Ottawa, making protest and avowing that the near future would see the complete spoliation of Niagara Falls and its disappearance as a tourist centre. Theoretical pictures were published showing bare walls of rock with not so much as a trickling stream of water falling over the crest, and Niagara was portrayed as having but one use left, namely, that of an immense bill board. Time has followed on, however, and very few of the evil results have materialized from the use of water, although in low-water stages there is reason to believe that the effect may be detected by close observation.

Upon the other hand, however, these same effects were quite as evident under abnormal conditions many years before power development was either possible or even thought of. Due to strong east winds Lake Erie has been known to increase its depth at the Detroit River to such an extent that the extremities of the Horseshoe Falls showed only ragged streams, because of the lack of water which ordinarily poured over them. The swing of the pendulum brought the great mass of opinion in this country to the realization of the possibility of destroying scenic beauty, and from this it was but a short step to enlist joint action by Canada and the United States to put into effect a limitation upon the total amount of water to be diverted. Thus we have the ratification of the Boundary Waters Treaty on May 13th, 1910. This treaty allotted 20,000 cubic feet of water per second to the United States and 36,000 cubic feet of water per second for use in Canada, the difference in quantity being accounted for by the fact that power developed within the limits of Ontario was being transmitted to the New York side of the river. There was a further limitation in the United States covered by the Burton Bill, which permitted an importation not exceeding 160,000 horse-power. The method of regulating the export of power to the United States by the Federal Government at Ottawa is to issue revocable permits governing the quantity of power which may be sent outside of Canada.

So much for the past, which with all its difficulties has solved the issues arising before it without a great deal of friction. The future, though, contains very different problems. Electrical energy is becoming scarce, and the time is approaching when the demands will exceed the limitations placed by the International Boundary Waters Treaty. The five-year period mentioned in the Treaty expires this year, and a twelve months' notice by either party will serve to terminate its provisions. The Burton Bill limitation has expired for want of re-enactment, although its limitations have not been exceeded materially, if at all.

The principle guiding negotiations in connection with boundary waters in the past has been the equal use by Canada and the United States of any waters diverted for power purposes, and this, as above indicated, was taken cognizance of in the unequal allotment of water at Niagara Falls, and was compensated for by transmission of power from Canada to the United States. Now, however, in the public press, and even in the written opinion of some public bodies, the suggestion is made that it is a duty of New York State to obtain for its people the use of the full amount of power which can be obtained from the Canadian hydro-electric plants, and the reason for this is not stated to be the equalization of the use of the waters of the river for power purposes by the two neighboring countries, but on the contrary because industrial establishments and works once enjoying this privilege will by the vested rights and interests created make it impossible for the return of power to the Canadian side no matter what necessity may arise. The Public Service Commission of the State of New York, Second District, in considering an application for the import of a 46,000 horse-power block of power created in Ontario made some very significant statements, and it is interesting to quote the opinion of the Commission as decided February 12th, 1914:—

Governmental Limitations Upon the Export of Electrical Power from Canada.

The Canadian Government requires the taking out of a yearly license permitting exportation of Niagara electric power. Upon the limitations existing as to the exportation of electric power from Canada into the United States, it appears that for many years, under the so-called Burton Act, and by action of the Canadian Government, a very large amount of Canadian produced Niagara electric power has been and is now being imported into this country at and about the Niagara frontier, and is being distributed for light and industrial power and railroad purposes within the State of New in many places, embracing Syracuse to the east, the south-western part of the State, territory south of Lake Ontario and Buffalo, and Niagara Falls in the west. The companies distributing this imported power have issued