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"EMERGENCY" DEVELOPMENT AT NIAGARA

O N another page of this issue, W. W. Young, a consulting engineer of New York City, outlines one of a number of schemes that have been suggested for emergency development of Niagara Falls. Mr. Young's scheme is no doubt quite feasible, provided that the two governments are prepared to ignore the scenic factor for some years to come. But, despite all the arguments in favor of discouraging tourist travel at present, we doubt exceedingly whether any measure could be passed through the House of Commons at Ottawa, or through the House of Representatives at Washington, which would mean the total elimination of any part of Niagara Falls,—even temporarily.

The only possible argument in favor of an emergency measure of such far-reaching consequences as that pro-Posed by Mr. Young, is the saving in time. The powerhouse, penstocks, etc., for the emergency scheme would no doubt cost quite as much, in proportion to the power secured, as would those for a permanent scheme. The great question, therefore, is how much time would be saved by such an emergency development in comparison with a plan of permanent development which would preserve the beauty of the Falls and at the same time take advantage of nearly the whole head between the two akes? Mr. Young suggests priority orders to facilitate the manufacture of the machinery, but would it be physically possible to get the necessary machinery built-under present conditions-for two or three years? And by that time the Ontario Hydro-Electric Power Commission will be in shape to supply 300,000 h.p. from its new plant at Queenston, and that should satisfy much of the power shortage until the completion of New York State's scheme

for permanent development under high head. Moreover, in connection with any emergency development of Niagara, there would no doubt be construction difficulties which might take no short period to overcome, although, given time and money, they could unquestionably be conquered.

The unwatering of the American channel would probably be the easiest part of Mr. Young's scheme. The hasty construction of intakes along the American cliff might not be so easy if ice trouble were to be obviated. For the safe operation of the emergency plant in winter, the removable low dam at the crest of the American Falls presents difficulties of design that would take time to overcome. But the American side of Mr. Young's scheme is easy of rapid accomplishment compared with the Canadian side. Mr. Young has rendered a national service-both to the United States and to Canada-in directing public attention once more to the urgency of the power problem at Niagara and its importance in winning the war. That more activity should be shown in the development of Niagara-particularly on the American side of the border-cannot be gainsaid, but it is a matter for very careful engineering deliberation as to whether such development should follow "emergency" or permanent plans.

CONSERVING OUR WATER POWERS

NON-DEVELOPMENT of our fuel resources may in some sense be considered as conservation, because posterity benefits. In other words, it is conservation of our fixed capital. No such reason, however, exists in the case of our water powers, which renew themselves continuously and partake more of the nature of revenue producers, which revenue being lost from year to year through non-use, is lost forever.

In considering the development of many of our natural resources, we are prone to reason from the point of view of private capital investing in a business from which stock profits are expected. Considered as a national asset and apart from private ownerships, a wider view is necessary for that development which under existing conditions might not yield a stock profit, yet would if developed from the larger point of view yield a living for many; and in addition, even though no profits were made, money would be kept in the country instead of being exported, and immigration would take advantage of the increased labor market.

It is, therefore, incontestable that from a national standpoint our power should be developed, even although no cash dividend results. This involves retention in the hands of the government of the ownership of our water powers for development by the government; or if in private hands, under such regulations as will permit their resumption by the State under fair conditions which will not preclude the utilization of such private capital as may be obtainable.

Canada has a superabundance of water powers for all present needs, but in view of the increasing demand for power for electro-chemical and electro-metallurgical processes, it becomes pertinent to inquire as to whether we are utilizing our resources in the wisest possible way.

First consideration should be given to the question as to the population which can be supplied with the necessary power, both now and in the future, for ordinary manufacturing purposes. In other words, conservation and increase of population. Secondary to this is the development of bulk production of materials from this power