

interest, present and future. While in some parts of Canada we may have outgrown former conditions and in such parts governmental machinery and laws with respect to water powers have not advanced as fast as might be desired, it must be remembered that there is but a short distance in time from the 50 h.p. overshot mill wheel of small efficiency and crude apparatus of local use and of little general importance to the community at large, to the 20,000 h.p. turbine of over 90 per cent. efficiency and 200 mile transmission line of to-day, of such widespread importance owing to the present universality of the electrical industry. In a very short time it is probable that legislators in all parts of the Dominion will have realized the advantage of and have put into force an efficient water power administration providing reasonable laws under which water power development will be fostered with due protection to the public interest.

In the lull which has temporarily supervened in power development in Canada, we can look back with satisfaction upon a long period of uninterrupted prosperity and marvellous expansion. This lull should enable the Dominion and Provincial Government Department, interested in water power matters, to perfect their arrangements for securing that physical and economic data which is always essential and a necessary preliminary to the financing of new water power developments.

While in the past there has been a great lack of reliable data regarding Canadian water powers, there is now much excellent work under way throughout the Dominion which if continued and extended without delay, will result in sufficient data being obtained regarding all powers within transmission radius of present or prospective commercial centres being available for consideration when the present financial stringency is relieved.

It has been said that the use of power in Canada for electro-chemistry, electro-metallurgy, and electro-siderurgy, has not kept pace with the advance made in these arts in other countries, and on the other hand that certain European countries are using about one-half of their developed water powers for these latter purposes. It must be admitted that most of the developed power in Canada is used for motive power, traction and lighting, and but a small percentage for electro-chemistry, electro-metallurgy, and electro-siderurgy. This condition of affairs is probably the result of a young country first, meeting its most urgent permanent and "primitive" power requirements, that is, for lighting, traction and motive purposes, and to temporarily postpone the extensive and intensive adaptation of power for electro-chemical and electro-metallurgical purposes; at any rate until adverse economic conditions and financial hazards surrounding the use of power for such purposes have been overcome. One thing certain, no country in the world has realized greater benefit from the advantages of hydro-electric power for domestic, municipal and manufacturing purposes, than have the people of the Province of Ontario, thanks to the Hydro-Electric Power Commission of Ontario.

In a general way any considerable extension to existing power plants and the development of additional water powers in Canada must depend primarily upon the demand for power from traction, lighting, and motive power sources, and but secondarily on the possible use of power for electro-chemical, electro-metallurgical, and electro-siderurgical purposes; of course the use of power for pulp-making alone excepted. Unless we use our power to supply the ever-increasing demand from our southern neighbors in the United States, the first use of power will grow directly with the increase in our population,