The Canadian Engineer

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The Canadian Engineer

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issued Weekly in the interests of the

CIVIL, MECHANICAL, STRUCTURAL, ELECTRICAL, MARINE AND MINING ENGINEER, THE SURVEYOR, THE MANUFACTURER, AND THE CONTRACTOR

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TORONTO, CANADA, JULY 9, 1909.

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Copy and cuts for changes of advertisements must be in our hands by the Monday preceding date of Issue. If proofs are to be submitted, changes should be in our hands at least ten days before date of issue. When advertisers fail to comply with these conditions, the publishers cannot guarantee that the changes will be made.

CANADA'S WATER POWER.

The water power of Canada is one of the most valuable assets, and when one considers that the probable available water power of Canada exceeds 25,000,000 horse-ower one must be impressed with the possibilities of hydro-electric development in this country. In a recent report on this question Mr. J. B.

In a recent report on this question Mr. J. B. Challies, B.A.Sc., of the Department of the Interior, Ottawa, estimated the minimum flow development of all the water powers of Canada at 25,682,907 horse-power, and of this enormous amount only about a fiftieth has been developed, or some 516,885 horse-power It has been estimated that the maintenance of one horse-power per annum from steam power requires 21.9 tons of coal. On this basis the Canadian water powers would develop annually as much energy as 562,455,633 tons of coal will give out in steam power.

The following table gives the distribution by Provinces of the power possibilities and of the present developments:—

	Minimum Flow	Present
Location.	Development.	Development.
Yukon	. 470.000	
British Columbia	. 2,065,500	73,100
Alberta	. 1,144,000	1,330
Saskatchewan	. 500,000	····· ····
Manitoba	0 0,	18,000
North-West Territories	. 600,000	
Ontario	3,129,168	331,157
Quebec	17,075,939	50,000
New Brunswick	. 150,000	
Nova Scotia	54,300	13,300
Total	25,682,907	516,887

The largest single water power is said to be on the Hamilton River, Labrador, where there are some nine million horse-power available.

With the solution of the problem of long distance transmission of electricity there will come a period of great activity in power plant erection.

Canadian water powers will in time be utilized for long distance haulage of freight and passengers. Electricity will be used for heat as well as for lighting, and the Department of the Interior did well in pointing out the location, distribution, and possibilities of Canada's water power.

MR. LUMSDEN'S RESIGNATION.

The resignation of Hugh Lumsden, Chief Engineer of the National Transcontinental Railway Commission, again places this great public work, its management, and its staff of engineers in the limelight.

Mr. Lumsden has been chief engineer since the organization of the Transcontinental Commission five years ago. This great enterprise has grown under his direction, and he must be familiar with routine and details to such a degree that his resignation will be serious, indeed.

It is but natural that in work of such magnitude, covering such a stretch of country, there should arise