

# The Canadian Engineer

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## The Fuels of Canada

Habitability of Certain Now Populated Sections of Canada Depends Upon the Efforts of Canadian Engineers in Bettering the Fuel Situation—Stirring Address at Annual Meeting of Canadian Society of Civil Engineers

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IF the violent rupture of the peaceful conditions existing some four years ago had not occurred, it is very doubtful whether the subject of fuels would attract any special attention to-day, unless, perhaps, a discussion of such a subject disclosed new fields for profitable exploitation. To-day, however, the attention of the people of this country is forcibly centered on this very subject; because we are realizing, perhaps for the first time, our dependence, to so large an extent, on the United States for this essential commodity, and, further, are beginning to understand that our supply of fuels from that country may be cut off at any time.

In the past, and up to the present, we have been depending largely on fuels mined and prepared for the market by labor over which we have absolutely no control. As a consequence, we are at the mercy of foreign strikes and industrial disorganization, and either one or both of these are liable to occur.

A strike of coal miners, or a railroad strike in the United States would affect Canada more seriously in certain respects than the States, since in Canada we would not have the advantage of accumulated reserves which the United States would be certain to have in normal times.

But, there is even a more important factor which we must consider, *viz.*, the necessity which may occur for the United States to keep her fuels within her own country. Such a situation may not arise for some time, but the indications are that we may have to meet such an emergency in the near future.

Canada, to-day, is facing a fuel situation of great gravity; a situation which has not been created by any special conditions in this country, but by those obtaining in the neighboring country. The United States is suffering from a shortage of fuels as a result of the withdrawal of skilled labor from the coal mines to other occupations, and, perhaps more directly, to the abnormal demand on the transportation facilities of that country for the carrying of material directly connected with the conduct of the war.

We are not wholly dependent on the United States for our fuel supply, but we are dependent to the extent of 55 per cent. of our total coal requirements and 98½ per cent. of our crude and refined oil products. Large and important sections of Canada, moreover, are almost wholly dependent on imported coal for house-heating purposes. This is a matter for grave reflection, since in a country such as ours, where artificial heat must be supplied during eight months of the year for the sole purpose of maintaining life, a continuous and dependable supply of fuel is absolutely essential.

The fuel situation existing in Canada to-day is due to the ease with which fuels of all kinds, suitable for every requirement, were imported from the United States, and to the apathy displayed towards the exploitation of certain of our own fuel resources by the public at large.

We have not exploited our fuel resources, with the exception of wood, on an extravagant scale, but, on the contrary, we have been culpably neglectful of these vast stores of energy, insofar as we have failed to provide for the future by learning how to use our low-grade fuels, on which at no distant time we shall have to depend. The result of this neglect to improve our position and render ourselves independent, as far as possible, will be great suffering to the people of Canada, in the event of a stoppage of fuel supplies from the United States, if we do not, at once, take steps to render our own fuel resources available for our own needs.

The present unsatisfactory—indeed alarming—situation can only be improved by a determined and energetic exploitation and utilization of our own vast fuel resources.

I am prepared to show that Canada does possess abundant supplies of fuels, favorably situated, and that these can be exploited in such a manner as to render her much less dependent on, if not entirely independent of, foreign sources for her fuel supply.

Before enquiring into our fuel possibilities, it is necessary to state and analyze our annual fuel requirements.

### Canada's Fuel Requirements

The total fuel requirements of this country during the year 1916 amounted to nearly 30,000,000 tons of coal; 299,426,121 Imperial gallons of crude and refined oil products, and firewood valued approximately at \$60,000,000.

The railways burned 9,000,000 tons of bituminous coal; 7,000,000 tons were probably required for the purpose of generating power, and a large quantity was used for making retort or town gas, heating large buildings, and the manufacture of coke. Over 4,000,000 tons of anthracite were burned in domestic and other heating plants, and, to some extent, were used for industrial purposes. In normal times, practically the entire imports of anthracite coal are used for heating purposes.

Compared with her annual requirements, Canada's production of fuels for the same period amounted to 14,483,395 tons of bituminous coal, of which 2,135,359 tons were exported; 6,934,288 Imperial gallons of crude oil, and wood fuel to the value of \$60,000,000. To meet our own needs, therefore, it was necessary to import 17,580,603 tons of coal, and 292,426,121 Imperial gallons of crude and refined oil products.