

Peat Investment Opportunity

With the conclusion of the 1922 season the work of the Peat Committee of the Canadian Government, covering four years of experimentation and development at the Alfred bogs in Ontario, may be said to be finished. In as much as the committee has achieved what it set out to accomplish. The committee has evolved a machine which, for efficiency and economy, it believes difficult to improve upon. It has demonstrated the practicability of manufacturing peat at a commercial profit and marketing it in Eastern Canadian centres successfully. With but limited opportunity, it has accomplished a great deal of work in popularizing peat fuel and has established the nucleus of a sound and expanding market. It has apparently done everything to pave the way for the commercial development of Canadian peat bogs.

With only slight qualifications, due to a power shortage which rarely affected the extent of production, the 1922 season at Alfred was one of successful and uninterrupted manufacture. The plant, which is the result of four years' constant improvement, and considered as near perfection as can be attained, is capable of a production of 100 tons per ten-hour day. The manufactured product has been placed on the track at \$5.00 per ton and reached the main markets at prices permitting it to enter into competition with imported anthracite coal. It is even suggested that under conditions it might be possible to shade this price a trifle.

It is significant that the entire peat production of 1922 was early bought up by the purchasers of the output of 1920 and 1921, who were eminently satisfied with the output of those years. It is further significant that the military complaint has been received for the 1922 peat crop. Furthermore, the response to five hundred questionnaires, sent out by the Government to peat-burners, in an effort to

elicit their experiences, highly satisfying and encouraging replies were received. Excellent results have been achieved by using an admixture of the two fuels, an admirable and practical usage, and experience has proven that a man ordinarily consuming ten tons of coal can use eight tons of coal and two tons of peat with greater convenience and a small financial saving.

This practice generally adopted would result in the immediate market in Ontario and Quebec of 1,000,000 tons of peat, eliminating one-fifth of the anthracite importations of those provinces. There are apparently no rocks to hamper progress to an extensive development of the peat bogs of Eastern Canada, nor any dangers to be apprehended in the way of finding a market. The possibilities of economic manufacture have been demonstrated beyond argument, and the popular quality of the fuel is now unquestionable. The demand for which is increasing and voluminous. The new manufacture does not set up as a rival to any other domestic production, but tends merely to curtail coal importations, the necessity for which hangs heavily at all times upon Eastern Canada, and at such times of a coal shortage as 1922 becomes acute to the extent of panic.

It so happens that there are large peat deposits adjacent to many populated and industrial centres in Eastern Canada, notably Montreal and Toronto, which offer unique opportunities for the enlistment of capital to develop them. If there is any significance to be taken from the manner in which the experiments and operations of the Peat Committee have been followed by commercial interests, it will not be long before these centres are furnished annually with a supplementary supply of fuel from domestic sources and Eastern Canada have taken a definite step towards conditions of greater independence in providing for her future winter's supply of fuel.

GREATER MONTREAL NOW A WORLD PORT

RAPID DEVELOPMENT OF CANADA'S METROPOLIS.

Globe's Greatest Inland Port is Assuming a Place of International Importance.

A well-known international authority, surveying the tremendous increase of trade coming to Montreal in the fall of 1921, made the observation that the Port of Montreal had been responsible for the Canadian metropol-

is in rapid manner of expansion. The number of visiting automobiles to Quebec, which in every year in the past decade has shown substantial increments over the previous one, doubled in 1922 over 1921. It was estimated that during the summer seventy-five per cent. of the guests at Montreal hotels were from the United States and further that visitors to the metropolis spent from \$20,000 to \$40,000 per day there, or approximately a total of \$8,000,000 for the season. Many conventions and gatherings of international, indeed, sometimes world importance, met there, and Montreal is fast becoming known as the Convention City of the continent.

Public Building Activity. This surprising growth and development has rendered hotel accommodation and other building space inadequate and brisk activity prevailed in effort to meet the demand.

Montreal has been strikingly developed to adequately fill the role.

The Canadian metropolis has, in fact, assumed a place of international and world importance. Greater Montreal has a population of roughly one million. It is the fifth city on the American continent, the second port of North America, and the globe's greatest inland port. The main entrance to Canada from the European continent is growing in favor of a continental port and as a link between Europe and the Orient.

In 1921 Montreal handled 138,000,000 bushels of grain, a volume twice as large as the port had experienced in any previous year. This year, however, the amount of grain to leave Montreal exceeded 155,000,000 bushels. "Shipping" of New York recently published a statement showing the grain handled through 14 ports for the season January 1st to November 25th, 1922. Montreal leading with 153,000,000 bushels, followed by New York with 111,071,092; then Baltimore, New Orleans, Philadelphia, Galveston, Portland, Boston, St. John, N.B., etc. The year saw many records at the port. In the season there was a total of 1,200 steamship arrivals as against 944 in 1921. The revenue in the month of October was the greatest in the port's history. One day in that month saw 92 ships berthed at local wharves—another record. A world's record for loading and unloading was broken when 2,569,393 bushels were moved at Montreal port in one day. More than one vessel arrived in the morning, to be loaded with 240,000 bushels of grain and more and set sail on the return trip the same evening.

Extensive Harbor Improvements. This increase of traffic has necessitated the hurried extension of facilities at the port, and many improvements have been effected on the harbor front in the expectation of a still further augmented business next season. A sum of four and a half million dollars is being spent on extension of the piers, railways, improvement of the channel and the construction of a new bridge. Elevator storage capacity has been so strained that the new factor is being built at a cost of \$3,347,000, with an initial capacity of 2,000,000 bushels, to be eventually increased to 3,000,000 bushels.

The port's business in 1922 was outstanding in all respects. The growing popularity of the St. Lawrence route with travellers from the United States was more clearly evident last year than ever, and in 1922 there was an increase of about fifty per cent. in this class of passenger traffic over the previous year. At the same time package freight, representing the output of Canadian factories and reflecting in a general way the state of the country's industrial activity, and particularly that of Quebec, was very much heavier than in the previous season. From any point of view, in fact, the Port of Montreal in 1922 experienced the biggest year of its history.

In a favor with which Montreal is being regarded by countries is amazing

WATER-POWER DEVELOPMENT

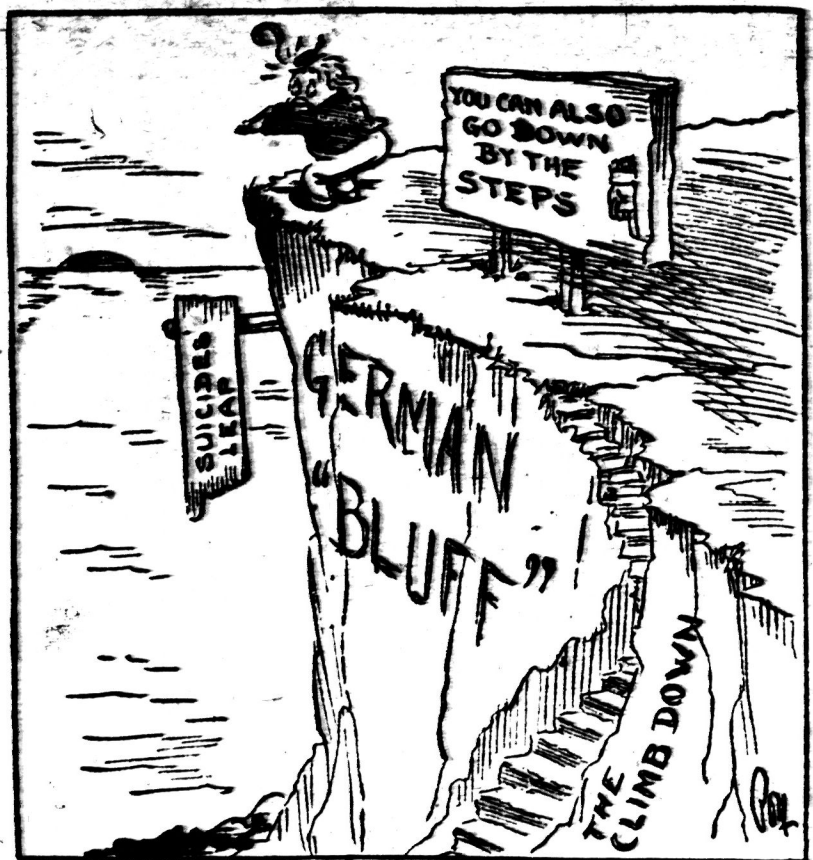
PRESENT INSTALLATION 2,269,659 HORSE POWER.

Figures Show Necessity for Intelligent Administration of Canada's Water-Power Resources.

One of Canada's greatest resources is comprised in its wealth of water-powers. In this respect the Dominion takes second place only to the United States in the extent of power available, maintains the same relative position in horse-power available per capita of population, following Norway, and again occupies the second place after the Scandinavian country in per capita hydro development. The development of Canadian water-power resources has been a prominent feature of national progress in recent years, and probably no other industrial factor has been largely responsible for the employment of capital and indirectly for the development of other industries. The harnessing of Canada's great water-power resources upon the future manufacturing status of the country is significant and is rapidly transforming the Dominion from a country almost wholly agricultural to one in which manufacturing interests are of great and growing importance.

There has just been published by the Dominion Water Power Branch a further and up-to-date statement of water-power development in Canada, covering the period up to November 1st, 1922, and this reveals the substantial progress effected in the past few years in hydro development in all parts of Canada and the greater part of Canada's water-powers have, in the last decade, come to play in the Dominion's industrial life. The recorded power available throughout the Dominion, under conditions of ordinary minimum flow, is 13,255,000 h.p. The water-power available under estimated flow for maximum development is 26,000,000 h.p. for at least six months of the year, is 32,076,000 h.p. An analysis of the water-power plants scattered from coast to coast gives an average machine installation of 30 per cent. greater than the six month flow maximum power. Applying this, it becomes apparent that the at present recorded water-power resources of the Dominion will permit of a turbine installation of 41,700,000 h.p. In other words, the present turbine installation represents only 7 per cent. of the present recorded water-power resources.

Recent Progress. During the year 1921 the readjustment of values following war-time inflation made substantial progress, but necessarily brought in its train many business and financial difficulties and



SECOND THOUGHTS ARE BEST

a lack of confidence in trading circles generally which led to a reluctance of capital to embark upon new enterprise. It is a remarkable fact, however, that the hydro-electric industry, though naturally affected by the general depression, suffered no setback, and in fact the horsepower installed during 1921, 300,000 h.p., stamps 1921 as one of the most progressive years in Canadian water-power history.

The 2,269,659 h.p. at present installed throughout the Dominion is apportioned to the following uses. A total of 2,184,870 h.p. in central electric stations for general distribution purposes, such as the operation of street railways, operation of mines, operation of electro-chemical and electro-metallurgical industries, operation of pulp and paper mills and for general industrial, municipal, and domestic use. A total of 484,228 h.p. is installed in pulp and paper mills. In addition there is used in the pulp and paper industry 160,577 h.p. purchased from the central electric station installation. A total of 320,561 h.p. is installed in industries other than central electric stations and pulp and paper mills. The total installation for the Dominion averages 338 h.p. per thousand population, a figure which places Canada second only to Norway in the per capita utilization of water-power among the countries of the world.

In Central Station Industry. By far the most important use to which development of water-power has been applied in Canada has been in connection with the central electric station industry. The extent of this industry and the important relation-

ship which power bears to it is measured by the fact that 97.2 per cent. of the power actually generated is developed by the use of water-power and that there is now invested some \$501,400,000 in hydro-electric plants and systems engaged in the production, transmission, and distribution of electric energy for sale.

Throughout the Dominion there are 269 hydro-electric central stations with an installed turbine capacity of 2,164,870 h.p. or a generator installation of 1,633,141 k.v.s. It is of interest to note that of this total turbine capacity 1,501,491 h.p. is installed in commercial or privately owned stations, while 663,379 h.p. is installed in municipal or publicly owned stations. The units vary in size from 10 h.p. to the 60,000 h.p. turbines recently installed in the Queenston development project and which are the largest water turbines anywhere installed. The turbine output of the industry averages 3,425 h.p. whilst the average installation of the central stations is 8,088 h.p.

Continued and systematic progress is being made in the further development of the industry. New units are being installed, new plants constructed, and new projects investigated to meet the growing domestic and industrial demand for cheap hydro-electric energy.

Pulp and Paper Industry. The manner in which water power has influenced and assisted in the development of the pulp and paper industry throughout the Dominion is demonstrated by the power statistics of the industry. Cheap motive power is almost as important to the production

Pioneering in Canada a Phase of the Past

Between 1901 and 1911 the population of the three Prairie Provinces of Canada increased from 419,512 to 702,684, and in the next decade, to the year 1921, to 1,155,393. The last decade was preeminently that of Western Canada, and though the progress over that area was seriously interrupted by the war it has probably been superior to that of any similar territory for the same period. The most powerful factor in this population building and in the settlement of the vast tracts of agricultural land in that area in the first period, has been the policy the Government adopted of free land grants of 160 acres in extent to heads of families and males of over eighteen years, who would settle thereon and perform the elementary military duties. It is safe to say that whilst, with the penetration of branch lines of the railroads, the same settlement would ultimately have been effected, the attraction of free land achieved this in a much more rapid manner than would otherwise have been the case.

Most men at some time in their lives, in many cases periodically throughout their mortal existence, experience the lure of the land, though for the majority this longing goes unsatisfied, their own circumstances and the prices at which privately owned land is held acting as hindrances to the following out of their inclinations. The possibility of securing for elementary development obligations land similar to that which in settled sections of the continent was held at figures which made purchase prohibitive to them, naturally drew the land-hungry from the corners of the earth to the Canadian West.

System of Land Survey. It was in 1872, shortly after Confederation, that the Dominion Government, recognizing the urgency of settling that vast area between the Great Lakes and Rockies, adopted the United States system of land surveys and grants. In every fifth township, two, and in others one and three-quarters, sections were set apart for the Hudson's Bay Company, and in all townships two sections as endowments for schools. The remainder, with the exception of the Canadian Pacific land grant, was thrown open for settlement by homesteading. No other country in that area offered the landowner such a generous boon, and the inauguration of the policy was followed by an influx of land-seekers the like of which has seldom been seen in the history of civilization.

Since the policy of homesteading was initiated in Western Canada at some half a million families have taken advantage of it, and approximately one hundred million acres in the Prairie Provinces have been settled and largely rendered productive by this means. Settlement on the Crown lands at this

rate could not go on for ever even in a land of such vast proportions as Western Canada. In 1906 the entries for homesteaders covered an area equal to that of Massachusetts and Delaware; in 1908 a Wales was given away; in 1909 five Prince Edward Islands; in 1910 there were still more entries aggregating 41,568; and in 1911 the movement reached its glacial pace with 44,479 entries, representing for that year the settlement through this means alone of between a million and a half and two million acres of fertile land.

Homestead Entry Decline. The annual totals of homestead entries began to decline before the outbreak of the war, indicating a diminution in the amount of available land, within reasonable distance from railway transportation, to be secured by the homesteader. The land-hungry Western Canada by seeking after free land largely spent its force, as was inevitable, after the heavy filing which prevailed for so many years. In 1921, comparing this with the record year of 1911, there were only 3,784 filings on homesteads in the three Western provinces, or the settlement, accomplished through this means throughout the area, of a little more than 400,000 acres.

It would be jumping to a very hasty conclusion, however, to assume that agricultural settlement in the Western provinces is therefore fully accomplished and that opportunity has ended. Only the initial steps have been taken, only the pioneering done. It is estimated by the Government that there are yet in the Prairie Provinces 120 million acres of good agricultural land awaiting settlement, 30,000,000 acres of which lie within fifteen miles of each side of constructed railways. In other words, the Western provinces are capable of settling nearly three times the present settlement and accounting for three times their present annual production.

What were the virgin prairie homesteads yesterday are today the rich producing farms which in their domestic and agricultural production section of the Dominion. These lands are changing hands, when farmers can be prevailed upon to sell, at prices sometimes in excess of \$100 per acre, and each year they are being held at higher figures as the prices of Canadian farm lands rise. A few years ago settlers paid \$10 for the filing right on these same pieces of land.

Greater Opportunity To-day Than Ever It would be erroneous to assume that because homesteading is declining settlement in the West is not still progressing. There are in Western Canada large tracts of fertile farm lands privately held which at the present day offer the same opportunities as did the homestead lands years ago, without the disadvantages homestead-

The Columbia-Kootenay Valley

The Columbia-Kootenay Valley includes the most extensive area of agricultural and pastoral land in the settlement of other sections of the province, the past few years have witnessed steady settlement and the general adoption of certain forms of agriculture. In particular the lighter phases of farming, such as truck gardening, have proved popular and profitable, and fruits and vegetables are produced which cannot be surpassed in other parts of the country. Markets of considerable absorptive powers are found in the mining districts of the province and the Prairie Provinces.

Progress in the Kootenay Valley in fruit and vegetable production is described by residents there as surprising. Having a due regard to the recent settlement and the still somewhat scanty population this is attested by shipments from the area in 1922. From Black Creek 8 cars of strawberries and 5 cars of apples were shipped; from Creston 6 cars of mixed fruit, pears, plums, cranberries, and early apples and 402 cars of apples; from Erickson 30 cars of mixed fruit and vegetables, 28 cars of apples and 3 cars of potatoes; from Canyon Station 4 cars of apples. The production for export at these points was about 220 cars of apples, 36 cars of mixed fruit and vegetables, 16 cars of berries, 3 cars of potatoes—a total of 275 cars in addition to a voluminous express shipment.

The manner in which production is increasing in the valley may be exemplified in the case of a single station—Erickson. Here the increase of shipments in 1922 over 1921 amounted to 7 cars of apples and 20 cars of mixed fruit and vegetables. The same point also shipped 3,400 boxes of tomatoes, 2,300 cases of green corn, 1,793 cases of raspberries—an increase of about 100 per cent. over 1921. Without doubt the Columbia-Kootenay Valley is one of the coming regions of British Columbia in the production of small fruits and vegetables.

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Throughout the Dominion 113 mills, operated by water-power, are engaged in the manufacture of pulp and paper, using in all hydro energy to the extent of 644,805 h.p. This total is made up of 484,228 h.p. actually installed in pulp and paper mills, plus 160,577 h.p. purchased by pulp and paper mills from central electric stations which derive their energy from water-power. Of the total installation 5 mills are located in British Columbia utilizing 48,300 h.p.; 41 in Ontario utilizing 248,146 h.p.; 54 in Quebec utilizing 320,192 h.p.; 3 in New Brunswick utilizing 14,668 h.p.; and 100 in Nova Scotia utilizing 17,900 h.p.

Past and Future Growth. It is interesting to note the growth of water-power development in Canada during the past decade. Since 1910 the total installation has grown from 975,000 h.p. to 2,970,000 h.p.; the central station installation from 605,000 to 2,165,000 h.p.; and the pulp and paper installation from 191,000 to 484,000 h.p. This average yearly increase in the past decade has been in excess of 180,000 h.p. installation. Should the rate of water-wheel installation during the past twelve years be maintained there will be installed in 1925, 3,360,000 h.p.; in 1930, 4,110,000 h.p.; in 1935, 4,860,000 h.p.; and in 1940, 5,600,000 h.p. In view of the increasing appreciation of the advantages of hydro-power, combined with the fortunate location of ample supplies within easy transmission distance of the industrial centres throughout the Dominion, there is every reason to anticipate that this rate of growth in utilization will be accelerated rather than retarded. This will not seriously reduce the total reserves for Canada possesses sufficient to serve to meet all anticipated demands for many years to come.

The water-power developed in Canada represents an investment of over \$20,000,000. In 1940, should the rate of growth outlined be maintained, this investment will have grown to well over \$1,100,000,000. The present development represents an annual equivalent of 25,000,000 tons of coal, valued at \$10 per ton, represents a total value of \$250,000,000. In the year 1940, these annual figures will, with the foregoing assumption, have become 50,000,000 tons and \$500,000,000. The figures are striking evidence of the outstanding importance and necessity of an intelligent administration and development of Canada's water-power resources.

The Thin-Ice Skater. When the well is dry we know the worth of water, and when the pocket is empty we know the value of money. The happy-go-lucky individual who spends as much as he makes is a thin-ice skater. If sickness or loss of work should come, he drops through and disappears. When old age descends upon him, it is unfortunate but true, that he usually finds himself in the breadbasket ranks of those who have seen better days. Those who practice thrift, who prepare for next year as well as this, go rapidly forward. A steady-growing bank account gives them confidence to branch out and courage to tackle bigger things. It makes the step lighter and the heart more cheery.—C. P. P. Pace-maker.

Pioneering Has Passed Away. The pioneering has been done in Western Canada, and those who fled on homesteads a few years ago are now reaping the fruits of their early efforts. The way has been paved for those who come after, who find a people and progressive land, railways, built, markets created, modern educational facilities, a healthy and good road, rural telephones and mail delivery, and all those conveniences which the pioneer must forego and gradually acquire and develop. It may generally be said that the Canadian West offers exactly the same advantages to-day she did years ago, with the difference that the pioneers of half a century have prepared the way for those who come now, and that pioneering, with all that it suggests, is practically a phase of the past.

Who Lives Longest? Talking with a big insurance man the other day, I asked him in what occupation he found the longest lived men. "Do you believe that?" "I do," replied the thin man. "I did his repair work."

8 a Fact!

The Riding Mountain forest reserve contains what is believed to be the largest herd of elk in Canada, estimated at between three thousand and four thousand head.