

**CIHM
Microfiche
Series
(Monographs)**

**ICMH
Collection de
microfiches
(monographies)**



Canadian Institute for Historical Microreproductions / Institut canadien de microreproductions historiques

© 1995

Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

Coloured covers/
Couverture de couleur

Covers damaged/
Couverture endommagée

Covers restored and/or laminated/
Couverture restaurée et/ou pelliculée

Cover title missing/
Le titre de couverture manque

Coloured maps/
Cartes géographiques en couleur

Coloured ink (i.e. other than blue or black)/
Encre de couleur (i.e. autre que bleue ou noire)

Coloured plates and/or illustrations/
Planches et/ou illustrations en couleur

Bound with other material/
Ralié avec d'autres documents

Tight binding may cause shadows or distortion along interior margin/
La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure

Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/
Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.

Additional comments:
Commentaires supplémentaires:

Coloured pages/
Pages de couleur

Pages damaged/
Pages endommagées

Pages restored and/or laminated/
Pages restaurées et/ou pelliculées

Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées

Pages detached/
Pages détachées

Showthrough/
Transparence

Quality of print varies/
Qualité inégale de l'impression

Continuous pagination/
Pagination continue

Includes index(es)/
Comprend un (des) index

Title on header taken from:
La titre de l'en-tête provient:

Title page of issue/
Page de titre de la livraison

Caption of issue/
Titre de départ de la livraison

Masthead/
Générique (périodiques) de la livraison

This item is filmed at the reduction ratio checked below/
Ce document est filmé au taux de réduction indiqué ci-dessous.

10X	12X	14X	16X	18X	20X	22X	24X	26X	28X	30X	32X
						/					

The copy filmed here has been reproduced thanks to the generosity of:

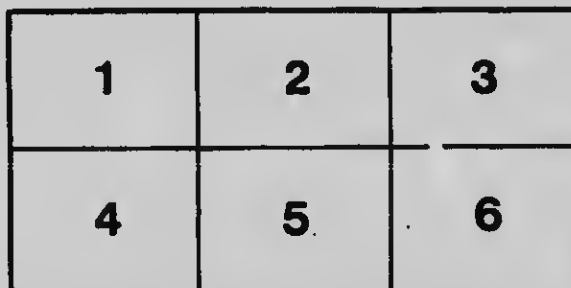
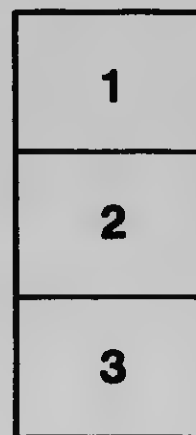
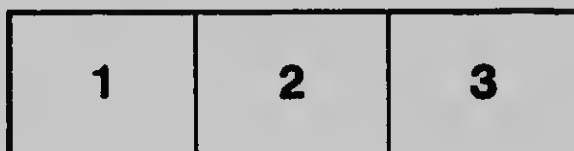
National Library of Canada

The images appearing here are the best quality possible considering the condition and legibility of the original copy and in keeping with the filming contract specifications.

Original copies in printed paper covers are filmed beginning with the front cover and ending on the last page with a printed or illustrated impression, or the back cover when appropriate. All other original copies are filmed beginning on the first page with a printed or illustrated impression, and ending on the last page with a printed or illustrated impression.

The last recorded frame on each microfiche shell contains the symbol \rightarrow (meaning "CONTINUED"), or the symbol ∇ (meaning "END"), whichever applies.

Maps, plates, charts, etc., may be filmed at different reduction ratios. Those too large to be entirely included in one exposure are filmed beginning in the upper left hand corner, left to right and top to bottom, as many frames as required. The following diagrams illustrate the method:



L'exemplaire filmé fut reproduit grâce à la générosité de:

Bibliothèque nationale du Canada

Les images suivantes ont été reproduites avec le plus grand soin, compte tenu de la condition et de la netteté de l'exemplaire filmé, et en conformité avec les conditions du contrat de filmage.

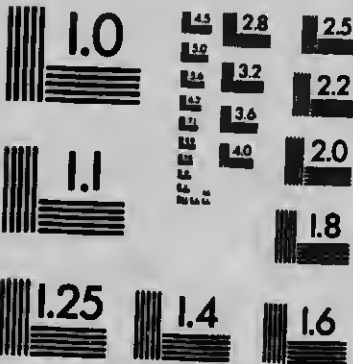
Les exemplaires originaux dont la couverture en papier est imprimée sont filmés en commençant par le premier plat et en terminant soit par la dernière page qui comporte une empreinte d'impression ou d'illustration, soit par le second plat, selon le cas. Tous les autres exemplaires originaux sont filmés en commençant par la première page qui comporte une empreinte d'impression ou d'illustration et en terminant par la dernière page qui comporte une telle empreinte.

Un des symboles suivants apparaîtra sur la dernière image de chaque microfiche, selon le cas: le symbole \rightarrow signifie "A SUIVRE", le symbole ∇ signifie "FIN".

Les cartes, planches, tableaux, etc., peuvent être filmés à des taux de réduction différents. Lorsque le document est trop grand pour être reproduit en un seul cliché, il est filmé à partir de l'angle supérieur gauche, de gauche à droite, et de haut en bas, en prenant le nombre d'images nécessaire. Les diagrammes suivants illustrent la méthode.

MICROCOPY RESOLUTION TEST CHART

(ANSI and ISO TEST CHART No. 2)



APPLIED IMAGE Inc

1853 East Main Street
Rochester, New York 14609 USA
(716) 482-0300 - Phone
(716) 288-5989 - Fax

D / 2015.2

**Ontario's True
Policy in Re
Black and Wh**

LIBRARY OF THE

With Compliments
W. K. McNAUGH

True National
Regard to
White Coal

EXHIBITMENT

compliments of
McNAUGHT

**ONTARIO'S TRUE NATIONAL POLICY IN
REGARD TO BLACK AND WHITE COAL**

HD9685

C32

M35

1910

C 2

Ontario's True National Policy

in Regard to

Black and White Coal

IT has often been asserted by the opponents of the Ontario Government's Hydro-Electric power policy, that while it might perhaps be all right for the manufacturer, it would be of little or no value to the ordinary citizen.

Objection has also been made, that while this power policy may be of benefit to those towns and cities lying contiguous to the Niagara Falls, it can only be local in its scope, and that therefore the other parts of the Province should not be called upon to contribute towards it in any way whatever.

The first of these assertions has been so often disproved, that I need not do more than point out that, although the manufacturer may primarily be the greatest gainer by this enterprise, it will also beneficially affect in the following ways every citizen residing in any of the districts where cheap Hydro-Electric energy is supplied:

- (1) They will be able to purchase electric light for their homes very much cheaper than they get it at present.
- (2) The cost of lighting public buildings and streets will be very much reduced, which will be a direct saving to every citizen who pays municipal taxes.
- (3) The same thing will obtain in regard to the power used by the municipality for pumping water for fire protection, street cleaning purposes, and household use.
- (4) The same thing will also obtain in regard to power used for operating Electric Street Railway Systems, especially those operated under public ownership, in which every citizen has a direct interest.
- (5) Every citizen who works in a factory, office or store will be a gainer in health by the substitution of electricity for lighting purposes, and in comfort by the elimination of the smoke nuisance.

As I have already said, these benefits are so self-evident that they have only to be stated in order to convince any fair-minded person that they are absolutely true.

The other assertion, while plausible on its face, has only to be examined to show how unfounded it really is. The Hydro-Electric power policy of the Ontario Government is not confined to the distribution of Niagara power, but is a much larger and far-reaching question than the general public have heretofore imagined, and I desire to take this opportunity of drawing attention to some phases of it which, so far, have not received the publicity and consideration to which they are entitled.

THE COAL SITUATION IN ONTARIO.

The Province of Ontario is unfortunate in respect of its fuel supply. Although it has an almost illimitable supply of pulpwood and other valuable timber, it is entirely without any coal of its own. True, Canada has magnificent coal beds in the Maritime Provinces, as also in the Western Provinces, but these are of little or no value to the Province of Ontario, inasmuch as the charges for transportation would practically put it beyond the reach of our citizens, except as a makeshift during a fuel famine. Practically every pound of coal used in this Province comes from the Pennsylvania coal mines, and, unfortunately, the corporations that own the coal also own the railroads over which it has to be transported. With this double-headed monopoly it is self-evident that the citizens of both the United States and Canada have to pay all that the traffic will bear.

In addition to this, another handicap is the duty of 53 cents per ton levied by the Dominion Government upon bituminous or soft coal, and which, as the Customs returns will show, is mainly borne by the people of this Province.

FUEL SITUATION IN ONTARIO WILL BECOME WORSE.

But bad as is the present condition of affairs in regard to the coal situation, it might be, and indeed it will surely be, very much worse, unless we become alive to the situation and conserve our natural fuel resources.

As I have already pointed out, although we have an almost inexhaustible supply of pulpwood and other valuable commercial timber, our supply of hard wood has been wasted to such an

extent that it cannot be counted on in the older settled portions of the Province except as a "*dernier ressort*" during a period of fuel shortage, so that, after all is said, the citizens of Ontario are really dependent for their fuel upon a foreign country, and the supply of this vital necessity may be cut off at any time from any one of a number of causes.

(a) A strike amongst the coal miners, such as happened a few years ago, might easily break out again, in which event, while our coal supply might not be altogether cut off, it would probably cost us at least double the present high price. During the last great strike of the coal miners in Pennsylvania, coal sold in Toronto at from \$14 to \$20 a ton, and even at that enormous price could only be secured in very small quantities.

(b) In the case of war between Great Britain and the United States (which God forbid), the export of coal to Canada would at once be absolutely prohibited by the United States Government, with the result that the greatest hardship would fall upon the working classes of this Province, who could ill afford to pay war prices for fuel, which could only be obtained from our Eastern or Western Canadian coal mines after a very long and expensive haul. But many will say that there is no fear whatever of a war between the United States and Canada, and they assert that such a thing is so possible in this age of enlightenment and Christianity. My own view is that, although war is improbable, it is not impossible, and one has only to study history, even that of our own country, to understand how such a thing might be brought about from something in which Canada had no interest whatever.

(c) But, even granting that war between Canada and the United States is absolutely impossible, there is still another and a more real danger confronting us in regard to the coal question that we cannot argue away, and that is, that the time is not far distant when necessity will force the United States to prohibit the export of coal and other natural products which cannot be replaced.

There is this difference between a fuel supply taken from the forest and one taken from the mines : In the case of the former, our forests can be scientifically husbanded so as to ensure a regular and unfailing supply for all time. With coal, however,

it is entirely different. Every pound taken from the mine reduces the supply by just that amount. It cannot be replaced again, so that it is only a matter of time, longer or shorter according to the way in which it is husbanded, when the supply will be entirely exhausted.

SELF-PRESERVATION WILL FORCE THE UNITED STATES TO PROHIBIT THE EXPORT OF COAL.

That the people of the United States are becoming thoroughly alive to the coal situation, is evidenced from their appointment of a Conservation Commission, which is now making exhaustive enquiry into the natural resources of the United States and how they can best be dealt with for the benefit of their own people.

But, says someone, if even what you say were true, there is little danger of an exhaustion of the coal supply of the United States for thousands of years to come.

In this, however, I am afraid that the wish is father to the thought. About two years ago (May, 1908) a meeting of State Governors and other distinguished and scientific men was called at Washington by President Roosevelt to discuss the conservation of the national resources. Amongst others who attended this meeting was Andrew Carnegie, and in his address he made the statement that the United States was even then within measurable distance of the exhaustion of their supply of anthracite coal, and he placed the life of the Pennsylvania coal fields at less than fifty years, even at the then present rate of consumption. This statement has since been confirmed by scientific authorities.

"Preservation is the first law of nature," and it is therefore probable that long before the coal in the United States becomes exhausted, the entire supply will be taken over by their Government and conserved in every possible way for the national benefit. One thing is certain, not a single pound of it will be allowed to be exported from the United States.

That this is not an alarmist cry is proved by the published opinion of prominent United States scientists. The Hon. George Ottis Smith, a Director of the United States Geological Survey, and one of the most distinguished officers of the United States Government, has this to say upon the matter, the italics only being mine :

"A glance at the world's reserves of coal shows plainly not only that the United States leads all other countries in production, our annual output being nearly 40% of the total, but also that it possesses the greatest reserves. *Still, in respect to no mineral is there greater need of emphasizing the folly of exporting the raw material. Let us keep our coal at home, and with it manufacture whatever the world needs.*"

Is it not suggestive of the future action of the United States, that such a policy should have been suggested by one of the leading officials of the Department of the Government charged with the care of its natural products.

That such a policy as regards coal is neither impossible nor improbable may also be inferred from the action of the United States Government in regard to their beds of phosphate rock used as an agricultural fertilizer. Acting upon the advice of their scientists, in December, 1908, the phosphate lands of the West were formally withdrawn from private entry, in order to conserve them for the use of the people of the United States.

Not only this, but President C. R. Van Hise of the University of Wisconsin is openly urging that there should at once be a law passed absolutely prohibiting the exportation of a single pound of phosphate rock, and he emphasizes this by the statement that the export of this necessity of the farmer would be regarded by statesmen of foreign civilized nations as unthinkable folly.

From the foregoing it will be seen that the trend of the United States policy, as regards natural products, is conservation for the use of the American people only, and that the very moment they believe that their own needs demand the prohibition of the export of such products, whether it be phosphate rock, coal or timber, they will not hesitate to enforce such a law.

ONTARIO'S REMEDY.

This being the case, what remedy will the people of Ontario have? So far as I can see, their remedy can only lie in three directions.

FIRST.—The application of scientific methods to our great virgin forests, and the reforestation of cleared lands which are unsuited for agriculture.

The application of scientific methods to our existing forests could be quickly brought about, but, unfortunately, only a small proportion of our standing timber is suitable for high-class fuel, and could never take the place of coal, either for heating purposes or for the production of power. - In addition to this, the supply is situated far from our present commercial centres, and, even were it suitable, the freight would enhance the price so much as to make its use almost prohibitive.

The reforestation of old Ontario, especially with hard woods suitable for fuel, would be a very slow and expensive process, but it could be done with profit to the community generally, and the sooner such a policy is entered upon by the Government, the better it will be for the future of the Province and for those who will come after us. For not only will such forests produce valuable commercial timber as well as fuel, but they would materially help our farmers by increasing the rainfall, diminish the danger from spring floods, and increase and equalize the flow of our rivers so as to render them more valuable for the development of Hydro-Electric energy.

SECOND.—The exploitation of the immense beds of peat fuel to be found within the boundaries of the Province.

The peat beds of Ontario are estimated to cover approximately 36,000 square miles, an area which would produce about 28,000,000,000 tons of air-dried peat, said to be equal in fuel value to about 14,000,000,000 tons of coal.

So far, however, it has not been found practicable to convert this peat into commercial fuel, but from the results of experiments now being carried on by the Dominion Government and others, there is no doubt that this will be ultimately overcome, and our peat bogs, which are now serious drawbacks from an agricultural point of view, be converted into profitable enterprises, to the great advantage of the Province generally.

THIRD.—The nationalization and development of our water powers.

This has already been taken hold of by the Government of Ontario, under the management of the Hydro-Electric Commission, and they are at present endeavoring to supply the people of Ontario with power as near its actual cost as is commercially possible. This is not only a new but a true national policy, which will ultimately be of advantage to every man, woman and child in the Province of Ontario.

EXTENT OF ONTARIO'S WATER POWERS.

Right here it is pertinent to enquire just what is the extent of our provincial water powers, and what is their real value.

Regarding this matter much has been said and written, but we are as yet without any reliable data from which we can give absolute facts, and it may therefore be taken for granted that many of the statements made are mere guesswork.

Thus, regarding the total water power of the entire Dominion of Canada, Mr. Challies estimates the minimum development of our water powers at 25,682,907 H.P., while the Hon. Clifford Sifton's estimate is only 16,696,279 H.P.—a difference of nearly 9,000,000 H.P. The estimates of the power development of the waters of this Province also show a considerable difference of opinion, as they range all the way from 4,000,000 H.P. to over 8,000,000 H.P.

Professor Fessenden, one of the greatest authorities in the United States, estimates that the Niagara River alone, taking it from its source to its mouth, is capable of developing 6,000,000 H.P., at least one-half of which belongs to Ontario.

In addition to the Niagara River development, there are many other good water powers throughout the settled portions of Ontario, and the following estimate of their capacity has been made by the Engineers of the Hydro-Electric Commission:

St. Lawrence and Ottawa District.....	1,521,526 H.P.
Moirs River and tributaries.....	4,900 "
Upper Trent River.....	17,265 "
Lower Trent River.....	43,510 "
S.W. Ontario Rivers tributary to Lake Huron and Georgian Bay and as far north as French River.....	59,483 "
Algoma and Thunder Bay District.....	350,675 "
Rainy River District.....	203,828 "
	2,201,187 H.P.

In addition to this, we also have the great water powers of Ontario's northern slope to James Bay, estimated by L. V. Rorke to be as follows, and, large as these figures may appear, they are considered by T. B. Speight (himself no mean authority) to be a very conservative estimate:

Abitibi, Black and Frederickhouse Rivers.....	359,300 H.P.
Matagimi, Kapuskasing and Groundhog Rivers.	693,800 "
Missinabi, Opazatiki Rivers.....	292,100 "
Kenogami River.....	98,800 "
Ogoke River.....	216,600 "
Winnipeg and English River.....	370,000 "
	<hr/>
	2,030,600 H.P.

These estimates would, therefore, figure up as follows:

Niagara River and District.....	3,000,000 H.P.
Central Ontario.....	2,201,187 "
Northern Ontario.....	2,030,600 "
	<hr/>

Total estimated water powers of Ontario..... 7,231,787 H.P.

As I have already stated, the above figures are only estimates, and our real water-power development will never be actually known until every stream in the Province has been carefully and accurately tested for its minimum and maximum flow of water by competent engineers. In the meantime, however, it will be fair to assume that our water powers will have a minimum development appreciating to one-half of the estimates given above, or say 3,000,000 H.P., which would appear to be a very conservative estimate.

VALUE OF ONTARIO'S WATER POWERS.

On the assumption, therefore, that we can always depend upon our water powers for a development of 3,000,000 H.P., what does this really mean to the people of this Province?

Translated into coal and taking 20 tons of coal as the amount necessary to produce one horse power of energy for 24 hours per day for one year (a very low estimate), it would mean that our water powers are as valuable to Ontario as coal mines capable of producing 60,000,000 tons of coal per year.

Translated into dollars and cents, it means that, taking coal at \$3.00 per ton, we would have an annual development of power from our waterfalls which, if produced from coal, would cost us \$180,000,000 in cash per year.

It must be remembered, also, that these returns would not be for one year, or even for fifty years, but as long as water follows nature's law to seek the lowest level, which will be for all time.

But some one will at once say that the saving to our people would not be the entire amount of the cost of power, but only the difference between the cost of steam generated and Hydro-Electric power. This is quite true, and this difference has been placed by Professor Fessenden at an average of \$20 per horse power per year, which would amount to \$60,000,000 per annum, if estimated on the 3,000,000 H.P. which our water powers are capable of producing.

These figures are so large as to make it difficult to realize just what they mean, but perhaps their importance can be better understood if the actual value that could be realized from the proper utilization of our provincial water powers is compared with the output of the farms of this Province. The official report of the Department of Agriculture for the Province of Ontario gives the market value of the crops for the year 1908, consisting of Fall Wheat, Spring Wheat, Barley, Oats, Peas, Beans, Rye, Buckwheat, Corn for husking, Potatoes, Carrots, Mangel-wurtzel, Turnips, Sugar Beets, Mixed Grain, Corn, Hay and Clover, as having a total value of \$164,077,282, which is considerably less than the actual cash value which could be obtained from our water-power development were it utilized to its full capacity. We boast of the wonderful wheat crop of our great and ever-expanding West, but in our provincial waterfalls we have a Golconda capable of producing each and every year, for all time, an amount of power worth nearly double the present annual value of our western wheat crop, enormous as that now appears to us.

PRESENT SAVING TO THE PROVINCE.

The figures given above are, as already stated, based upon the full development of our water powers, and the objection may be raised that at the present time but very few of them are developed, and that therefore the estimate of the amount of power which may be obtained from them is merely theoretical and of little practical value.

Owing to the way in which our census returns are made out, it is impossible to furnish an accurate statement of the power used in manufacturing, either in the Province of Ontario or the Dominion of Canada, something which it is to be hoped will be remedied when the new census is taken next year. It has been estimated by Mr. Sifton, however, that at the present

time there is a total water-power development in the entire Dominion of 514,890 H.P., which displaces and practically prevents the importation of over 11,000,000 tons of coal per year. He estimates that in the Province of Ontario our present water-power development is 331,157 H.P., which saves the cost of importing 7,285,454 tons of coal per year. So far as this Province is concerned, these figures appear to be very large, and my investigations do not warrant a credit to this source of energy at present of more than 232,000 H.P., which, at the coal equivalent assumed by Mr. Sifton, would be equal to 5,104,000 tons of coal per annum, but even at these reduced figures it is a very satisfactory showing.

In this connection it might be well to note the value of the coal annually imported into Canada, remembering that almost the entire of the bituminous coal is used for generating power which could be produced at far less cost within our own country from water powers which are at present going to waste.

Year Ending March 31st, 1909.	Tons.	Value in \$.	Duty Paid.	Total.
Bituminous....	6,763,352	\$13,151,449	\$3,148,045	\$16,299,494
Anthracite.....	3,059,663	14,034,202	—	14,034,020
Totals.....	9,823,015	\$27,185,469	\$3,148,045	\$30,333,514

It is worthy of note by the people of this Province that not only do these imports of coal come almost entirely from the United States, but that nearly the entire of the bituminous coal is imported by the Province of Ontario, which Province pays into the Dominion Treasury practically the entire amount of the duty levied upon this article. It is also worthy of note that the \$3,000,000 of duty levied upon the motive power of this Province is a handicap which the manufacturers of Ontario have to contend against from which their United States competitors are absolutely free.

A NEW NATIONAL POLICY.

As I have already endeavored to point out, owing to its geographical position and its geological formation, this Province is dependent for its coal supply upon the United States, a source that self-interest, combined with self-preservation, must ultimately and inevitably close to us.

With these things staring us in the face, the question arises: What should our people do under the circumstances?

In view of the facts already stated, it must be self-evident that, although there are possible sources of supply in our forests and peat bogs, yet the greatest as well as the best and most immediately available asset of this kind that we have, is the energy that can be derived from our splendid water powers. In proof of this statement I desire to quote just one sentence from the admirable address of the Hon. Clifford Sifton before the Canadian Conservation Commission in January, 1910, when he said: "The flowing waters of Canada are, at the present moment, apart from the soil, our greatest and most valuable undeveloped natural resource. They are more valuable than all our minerals, because, properly conserved, they will never be exhausted; on the contrary, they can be increased."

While the transforming of electric energy into heat has not yet been so perfected as to make it commercially successful, it does not seem unreasonable to assume that long before it becomes absolutely necessary to utilize it for heating purposes, inventive science will have solved even this difficulty, and brought it within the reach of every citizen in the province.

Apart from the heating of buildings, however, the advantages of a cheap and almost unlimited supply of Hydro-Electric energy to the Dominion of Canada, and more especially the Province of Ontario, will be many.

I have already mentioned some of these advantages in a former part of this article, but although highly important, they were only such as concern the citizen in his private capacity. There are others of a national character, however, which should appeal to every patriotic citizen.

As I have already pointed out, the greater part of the power at present used in this Province is generated from steam, produced from coal imported from the United States at an annual cost of over \$16,000,000 in good Canadian money.

Even if the utilization of all of our water powers could not produce more electric power than would offset this \$16,000,000 now paid for steam coal, would it not be a wise as well as a patriotic policy to try to keep this vast amount of money in Canada, where it would be used for the purpose of paying our own artisans and engineers in order to utilize water powers

which would otherwise go to waste, instead of sending it to swell the pay roll of United States coal miners or fill the coffers of the coal barons of that country?

As I have already pointed out, however, the potentialities of our provincial water powers are so great as to eventually effect a saving ten times larger than our present coal consumption, large as that may look to us just now.

In my opinion, the day is not far distant when Hydro-Electric energy will be generally used throughout this Province for every purpose for which power is required. Even our present steam railways will be transformed into electric roads, and thus become the largest customers for Hydro-Electric power instead of being the largest consumers of imported coal, as they are at present.

ONTARIO'S MANUFACTURING FUTURE DEPENDS UPON THE PUBLIC OWNERSHIP OF HYDRO-ELECTRIC POWER.

The effect upon the Province of Ontario when the Government's policy of cheap Hydro-Electric power becomes fully realized, must be very beneficial to the great mass of our citizens. Not only will they have cheaper light for domestic and public use, cheaper water, cheaper street car service, purer and healthier air in their dwelling places and workshops, but we will have cheaper power for our manufacturers, which will mean more work and higher wages for our artisans.

The future of Ontario as a manufacturing Province is largely bound up with the power question. If we are to maintain our present position as the manufacturing centre of the Dominion, let alone improve our lead on the other Provinces in this respect, we must not only utilize our splendid water powers to their utmost capacity, but we must also take full advantage of the Government's policy of publicly-owned power; power owned by the people and distributed amongst them at as near its actual cost as possible.

The vital importance of cheap power to manufacturing development is strikingly illustrated by the following extract from the last Census Report (1900) of the United States. (The italics are mine.)

"The total value of the manufactured articles produced
" in the United States during the year of 1900 was approxi-
" mately thirteen billion dollars. 5,300,000 wage-earners

" contributed their labor to produce these articles, and
 " 11,300,000 horse power were used for manufacturing
 " purposes. Thus, for every wage-earner 2.13 horse power
 " were used to aid him in producing \$2,452 worth of goods
 " during the year. No other country employed power to
 " an extent at all comparable with this, and also no other
 " country derived such great returns in manufactured
 " articles from its workers. Russia and Spain, which stand
 " lowest in the list of power-using countries (.15 H.P. per
 " wage-earner), produced in value of manufactures only \$440
 " and \$361 respectively, per wage-earner.

" Canada during the year 1900 produced \$800,000,000
 " worth of manufactures by the aid of 550,000 wage-earners
 " and 750,000 horse power. For each wage-earner, aided
 " by 1 3/8 H.P., an average of \$1,455 worth of goods was
 " produced.

" Evidently cheap power is the most important factor in
 " social economics, and is of similar effect as regards the com-
 " munity which enjoys it, as are the natural resources of raw
 " materials.

" The following statistics are of interest, as they indicate
 " clearly the relation which exists between manufacturing
 " progress and the use of power:

RELATION OF POWER TO MANUFACTURES IN VARIOUS
 COUNTRIES OF THE WORLD IN THE YEAR 1900.

Countries.	Wage-earners.	Total H.P. used in Manufactures.	Value of Products.	Value of Products per Wage- earner.	H.P. per Wage- earner.
United States..	5,308,408	11,300,081	\$13,004,400,143	\$2,450	2.15
Canada.....	550,000	750,000	800,000,000	1,455	1.36
Australia.....	550,000	460,000	500,000,000	900	.80
Switzerland....	600,000	320,431	300,000,000	500	.54
Belgium.....	1,550,000	630,000	720,000,000	480	.42
Sweden.....	490,000	200,000	280,000,000	572	.41
Norway.....	200,000	80,000	90,000,000	450	.40
Germany.....	10,000,000	3,400,000	4,600,000,000	460	.34
United King...	9,000,000	3,000,000	5,000,000,000	556	.33

The importance and value of our great water powers is strikingly emphasized by the efforts that promoters and monopolists are making to secure them before the people become alive to their real value and importance.

On every hand, from the St. Lawrence to the extreme west of Ontario, we find groups of capitalists endeavoring to get their grip upon our water powers, the same as they have already secured upon those of the Niagara River. If this is once permitted, it will mean that, so far as price is concerned, the monopolists will charge "all that the traffic will bear," and the people will for all time have to pay just as much for Hydro-Electric power as they would have to pay were the power generated by steam, and as a result of the possession of these natural monopolies the millions of dollars of saving that will be effected by utilizing our water powers would go into the pockets of private individuals instead of being distributed amongst the people generally. The only relief that they could ever hope to obtain from such a state of affairs, would be to buy back at enormous prices, franchises which they had parted with practically for nothing.

EXPORT OF HYDRO-ELECTRIC POWER A MISTAKE.

Just here it might be pertinent to point out that, so far as the true interests of the people of Ontario are concerned, not a single horse power of Hydro-Electric power should ever have been allowed to be exported from this Province to any foreign country. Unfortunately in years gone by, charters were granted to corporations which not only gave them a practical monopoly of power development on the Niagara River and at Fort Francis, but allowed them to sell a large proportion of it for export; so that even with its broader outlook and larger recognition of its responsibilities to the people, the present government on taking office found itself confronted by Hydro-Electric monopolies and trammelled by agreements for export, which abuses they have only been partially able to remedy by the adoption of a national and public-spirited power policy which has been emphatically endorsed by the people of this Province irrespective of party.

It is true that we cannot at present utilize all of the power that we are capable of developing, and we may not be able to do so for years to come, and it may look, as some claim, that it is a "dog in the manger" policy to refuse temporary export of something that is only going to waste, and which they claim that we could get back again whenever we so desired.

Could we get it back again whenever we wanted it? I, for one, do not believe that we could. It seems to me that once power has been exported to the United States and great enterprises have been built up in order to utilize it, necessitating large investments of capital, and giving work to a vast number of employees who have become dependent upon these enterprises, that we will have created a very difficult situation. Power is the life-blood of manufacturing, and if we think we can cut off the main artery of all this manufacturing activity whenever we see fit, I am afraid that we shall be lamentably disappointed.

Even were rigid agreements made before allowing the power to be exported, there would certainly be a very sore feeling engendered were an attempt made to enforce the provisions of such a contract, and a situation might easily be created which would lead to commercial reprisals, if not actual hostilities. Bloody and destructive wars have often been brought about for causes of far less importance than this, and Canadians do not need to go farther back than President Cleveland's Venezuelan message to learn that even a trifling international difficulty can easily be fanned into a flame which will sweep everything before it. Even were there no danger of actual warfare, anyone can understand how the United States might endeavor to coerce Canada by tariff and other reprisals, such for instance as prohibition of the export of coal, raw cotton and other natural products that we must have for manufacturing purposes, which would not only be injurious to our prosperity, but would seriously interfere with the good feeling existing between the people of that country and ourselves.

THE PRESENT POWER SITUATION.

We are to-day confronted with the fact that at Niagara Falls we have a present export to the United States of 91,000 H.P., and agreements to allow the export of 200,000 H.P. The time is coming, and perhaps it is not so far distant as some people imagine, when we shall need all of this Hydro-Electric power for our own use. Will we then be able to secure its return without commercial or actual warfare? I am afraid not, and it looks to me as if in this case we had, metaphorically speaking, parted with a large portion of the people's heritage for a mess of pottage. (*See footnote for particulars of Niagara power.)

Before leaving this phase of the subject, it might be pertinent to point out that a great mistake was made by the Ontario Government when, in 1887, they granted a charter for the development of power at Niagara Falls. They should have forced its development at Queenston Heights or Jordan, where, on account of the extra fall, practically double the amount of power can be developed from the same amount of water as at Niagara Falls where it is now developed. It is quite possible that in the perhaps distant future, this power policy will be forced upon the people of this Province, and they will find it not only profitable but necessary, to abandon the present great Hydro-Electric enterprises at the Falls and locate them where Nature evidently intended them to be.

What has been done at Niagara Falls, private monopolists have also been trying to repeat on the St. Lawrence, as well as in Western Ontario. It is true that these attempts have temporarily failed, but our people may rest assured that the United States capitalists who desire possession of these great natural monopolies have not given up the fight, but that they will be heard from again, and that in the near future, although probably in a different way.

ONTARIO'S FUTURE.

It was the great Lord Bacon who said: "There are three things which make a nation great and prosperous—a fertile soil, busy workshops, and easy transportation for man and goods from place to place."

This wonderful compendium of national philosophy can easily be verified in the Province of Ontario, if our people are only alive to their opportunities and true to the traditions of their race.

We have a soil and climate admirably suited for agricultural purposes, as the statistics of our crops will amply attest.

We have busy workshops manned by energetic and skilled artisans; and we have, generally speaking, by means of our unrivalled waterways and our network of steam and electric railroads, easy transportation for man and goods from place to place.

These things we now have in a moderate degree, but each and every one of them can be very much improved by utilizing to the fullest extent the natural advantages that a beneficent

Providence has placed within our reach. I have attempted to point out some of these, and if I have succeeded in drawing public attention to the potentialities of our magnificent water powers, and the wonderful advantages which will accrue to our people generally by the proper utilization of these great natural monopolies, I feel that I shall have been amply rewarded.

—W. K. McNaught.

Toronto, August 15th, 1910.

* POWER DEVELOPMENT AT NIAGARA FALLS.

NAME OF POWER COMPANY.	Maximum Amount of Power they are allowed to develop.	Total Amount of Power they are now developing.	The amount of Power they are now selling in U.S. or to the U.S.	Amount of Power they are allowed to export to the U.S. by their Canadian Charter.
Ontario Power Co.	180,000 or more if possible.	52,000	35,000	All but half must be available for Canada when required.
Canadian Niagara Power Co.	100,000	46,000	46,000	Do.
Electrical Development Co.	125,000	12,800	10,000	Do.
Niagara Electric Railway Co.	10,000	0	None.	No restriction.
TOTALS	415,000 H.P.	142,800 H.P.	91,000 H.P.	

In the case of the Ontario Power Co., their charter does not restrict them to any definite amount of power, but they are allowed to lay three 18-foot pipes, which are estimated to carry 60,000 H.P. each.

In the matter of export to the United States: Consent must be obtained from the Dominion Government, Department of the Interior, to export any power. After this license has been granted, they must then obtain permission from the War Department of the United States to import the same quantity. The Deep Waterways Treaty limits the amount of water that can be abstracted by each of the companies from the Niagara River.

The Burton Bill, passed by Congress in June, 1906, limits the amount of Niagara power that may be imported into the United States, to 100,000 H.P., divided as follows: Ontario Co., 60,000 H.P.; Canadian Niagara Power Co., 50,000 H.P.; Electric Development Co., 45,000 H.P.; Niagara Electric Railway Co., 5,000 H.P.

