

(November 7, 1932)

Hydro-Electric Finance

By HON. J. R. COOKE,

CHAIRMAN ONTARIO HYDRO-ELECTRIC POWER COMN.

PRESIDENT CHALMERS:—The guest of the Canadian Club of Toronto to-day is Hon. J. R. Cooke, Chairman of the Ontario Hydro-Electric Power Commission. It is hardly necessary for me to introduce Mr. Cooke to you. There are two things I would like to say about him, though, by way of adding something to your intimate knowledge of him. You see in Mr. Cooke the embodiment of sixty-four years tenure of office. His father was for thirty-two years engaged in the municipal affairs of the town of Sterling. Mr. Cooke himself for eleven years was in municipal affairs in Stirling and has since been twenty-six years in provincial politics. At the last provincial election the Liberals met in the constituency of North Hastings and selected a candidate and the Conservatives also met, and each of the conventions selected the one candidate, Mr. Cooke, who was thereby elected by acclamation. The purpose of inviting Mr. Cooke here to-day is to give the members of the Canadian Club of Toronto an opportunity to hear what will necessarily be an official view of a number of hydro matters that have recently been in controversy. We are not asking Mr. Cooke to add fuel to any flames. We are not asking him to make any defence of Hydro policies, but merely to discuss in an informal manner a number of things that have recently occupied a great deal of attention in the newspapers. Mr. Cooke.

HON. J. R. COOKE:—Mr. President and gentlemen, I hope in the introduction your President has given that you will forget, for the moment at least, that I have been

associated for twenty-one years with some of these gentlemen surrounding me. It is now over a quarter of a century ago since the Legislature of this province realized that, situated as we are in a province without coal, our industrial operations must largely depend on the development of our water-powers, and so the Hydro-Electric Power Commission was formed with authority to deal with those problems. It is many years ago since those most active in the affairs of the Hydro-Electric Power Commission recognized that if the Province would realize to the full the possibilities that its waterpowers offered, it could only be by developing them under some large comprehensive scheme by which industry would be assured of abundant reserves of power at the actual cost of power production. And so this province embarked upon a scheme by which the Province itself financed the Power Commission in the development and transmission of power, and, contrary to the general impression that has existed, that the municipalities have pledged bonds or debentures for the service which the Hydro Power Commission renders, there is not a Hydro municipality in Ontario that has ever pledged one dollar of negotiable securities for the investment that has been made by the Hydro Power Commission. The whole operations of the Commission are upon the credit of the State itself because, of the two hundred and seventy million dollars which the Power Commission has invested in those services, two hundred million dollars have been advanced by the Province in cash and the balance has been financed by Commission bonds guaranteed by the Province of Ontario.

The Commission in its operations has divided old Ontario into four distinct systems, each of which is a single unit, and the expenditures made by the Commission in any one of those systems is in no way reflected in the cost of power upon any of the other systems. The area which lies between Whitby on the west and the Ottawa River is what is known as the Eastern Ontario system. Then between the County of York in the east and Windsor on the west and Niagara Falls on the south lies the Niagara and most important system. The Georgian Bay system serves that

territory from the northern boundary of the Niagara district and embraces Bruce and the other counties of north-west Ontario. Then there is the Thunder Bay system which serves Port Arthur and Fort William.

The underlying principle of all the Commission's operations is that power must be supplied to the municipalities at cost. It was upon that principle of power at cost that three hundred and sixty million dollars have been invested by the Province and the municipalities in their operations, and so any departure from that principle at present would be quite unthinkable. Now the method by which the Commission has been financing all its operations is, as I have said, either by direct advances in cash by the Province of Ontario or else by a bond of the Commission that is guaranteed by the Province. I don't know that I can explain it to you more fully.

Your President has just suggested to me to say something upon the controversy in regard to exchange. When you realize that forty-three per cent of the total capital indebtedness of the Province of Ontario is the cash advances that the Province has made to this Commission, then you see the importance of the Commission paying the full cost of that money to the Province. The Province of Ontario does not make one dollar through advancing money to the Commission. What the Commission pays to the Province for these cash advances is the average cost of money to the Province of Ontario for that year. The average cost of money over many years was around five per cent. But the cost of money is the most important factor in determining power costs to the municipalities.

Briefly sketching the method by which the municipal power costs are arrived at, I might suggest this to your mind. In basing the rates which each municipality must pay to the Power Commission for power, it takes into consideration the amount of revenue that is necessary in order to pay the interest, which to date has been about five decimal one per cent, and secondly the amount of revenue that is necessary to form a sinking fund to redeem the bonds of the Commission and to repay the cash advances to the

province over a forty-year period. That is about one per cent. The next most important factor is to secure sufficient revenue to set up a renewal reserve sufficient to maintain its property at one hundred per cent efficiency, so at the end of the sinking fund period, or when the ownership of these properties passes to the municipalities, they will either be in perfect state of operation or else there will be sufficient money on hand to rebuild them. Then there is a fund to be set up for stabilization of power costs and contingencies. The Commission also has to secure sufficient revenue to pay over to the Province rentals upon the power sites that it is developing. It has to secure sufficient revenue to pay the amount of municipal taxation levied on the properties which the Power Commission operates. And then there are operating and administrative charges.

Now all these factors together amount to about ten per cent upon the amount of investment made by the Commission to provide for that service. Let me illustrate perhaps more clearly how it works out. Let us suppose that municipality "A", located in the Niagara system, applies to the Commission for ten thousand horsepower and the Commission finds that it is necessary for an investment to be made of two million dollars. Then ten per cent upon that two million dollars, or two hundred thousand is the annual charge made to Municipality "A" for that power, or twenty dollars a horsepower. But let us suppose that municipality "B", located in the eastern system, applies for ten thousand horsepower and the Commission finds that owing to the development being more costly, or the transmission distance being greater, that it is necessary to make an investment of three million dollars to give them that service, then ten per cent upon that three million dollars or three hundred thousand dollars will form the annual charge to municipality "B", or thirty dollars a horsepower.

But in that set up of the factors that determine the power costs to the municipalities, you will notice that the dominating factor, the costs of money, are over sixty per cent of the total power costs. The interest charge which the Commission has to pay to the Government of Ontario

for this year is roughly speaking quite a bit in excess of ten million dollars. The amount of interest that the Commission has to provide for, upon the bonds which have been assumed or given by the Commission in the purchase of different power plants is around two million four hundred thousand dollars, plus the sinking fund which the Commission has paid over to the Province for its cash advances, is this year,—and I am speaking just approximately—sixty per cent of the total power costs.

Now the cost of the exchange is just as much a part of the cost of money as the interest was. To-day that amounts to about six-tenths of one per cent, and yet your regular interest rate plus the exchange is less than the amount of interest which the Commission paid in 1919.

That sketches briefly the method by which the Commission determines the costs that it shall charge the municipalities for power. But when the municipalities attempt to merchandise or retail that power to their customers, again the Commission must approve of the rates that will apply for the different services, such as domestic, commercial or municipal, and for this reason, because that municipality had found it necessary to issue its own debentures to either purchase or construct its own local distributing system, and the Commission is anxious to see the revenue secured by the local commission will be sufficient not only to pay for the wholesale cost of power to the Commission, not only pay operating and administrative charges, but that it will be also sufficient to redeem the debentures which that municipality had issued in order to provide the distributing system, so that there shall never be one dollar of municipal taxation imposed on property in any form for electrical service by the Hydro Power Commission.

There was no security ever pledged by the municipalities for the payment of these tremendous advances of the Province, but I have always believed that there were two things in legislation that gave great protection for the repayment of those advances. First there was the authority which the Legislature gave to the Government years ago to dictate the personnel of the Commission, whose duty it would be

to see that the affairs of the Commission were kept in such a solvent condition that there would never be any question of its ability to repay these huge advances by the Government of Ontario. The second thing was, as I say, that the Legislature gave authority to the Commission to dictate the rates, and it is very seldom that any friction has ever arisen between the municipalities and the Power Commission upon that score.

Now the methods employed by the Commission in dealing with rural distribution differ somewhat from those of dealing with urban centres, because, while the Commission compels urban municipalities to issue their own bonds or debentures or to purchase or construct their own distributing systems, the Commission does not ask the power customer in rural districts to invest one dollar or one cent. The Commission, through cash advances made by the Province of Ontario, makes every dollar of investment that is necessary to take the power to the farmer's home, even to purchasing the transformers that are necessary. Not only that but, while the commission compels the urban municipality to repay with interest every dollar that the Province has advanced to give them service, the Commission only asks for a return from the rural customer of one-half of the money invested for their service, making the rural customer a free gift of one-half of the money that was invested for their service.

Now the reasons that prompted the Legislature to adopt the principle to bonus the construction of highways throughout Ontario and to give a greater legislative grant to rural schools than they do to urban schools are the very reasons that prompted the Legislature, a few years ago, to give a grant in aid to rural distribution. I think it is generally conceded by everybody, particularly at this period, that one of the great evils of the day is the drift of population from the country to the city, and I was much interested in the remark made by one of the speakers at the Canadian National Exhibition a few years ago, when he said that a more serious effort should be made to readjust the balance of population between the country and the city. But, Mr.

President, that drift of population from the country to the city is a condition that is not peculiar to the Province of Ontario alone: it is a condition that is common to practically every state of the great American Republic to the south of us. Dr. W. J. Black, in giving his evidence before the parliamentary committee upon colonization and immigration at Ottawa, made this significant statement in his evidence. He said there is going on in the British Isles to-day a movement that is going on in every country that is a joint agricultural and industrial country, and that is a movement from the country to the city. He said that he had lived in England during the previous year and was closely in contact with what was happening and that in that year over sixty thousand men had left the farms of England and gone to the towns and the villages to live. So that drift of population, I say, is general wherever the Anglo-Saxon race is dominant in any country, because the Anglo-Saxon race for the past few years has been seeking the secret of acquiring higher standards of living. What is the great difficulty in dealing with the problem? In cities you see wealth, assessable wealth, largely assembled upon a small area, and statistics show that the average assessable value of the town and city is about five million dollars a square mile. In the city, I believe, it approaches more closely perhaps to twenty-five. But the average for Ontario is about five million dollars, while the average assessable value of farm lands in this province is less than fifty thousand dollars a mile. Now, owing to the fact that assessable wealth is one hundred times greater in the city than it is upon the same area in the country, one can easily understand the unbearable rate of taxation that would be necessary in the country to provide the same luxuries and the same conveniences that every living human being, who seeks to earn an honorable living, is entitled to enjoy. If you want to retain upon the farms of this province our own Ontario born population, who are the most valuable to our agricultural life to-day, then generous assistance must be given by the Legislature of this province, not only in the construction of highways, not only in the elementary

schools of Ontario, but generous assistance must be given by the Legislature towards the distribution of electric light and power in the rural districts; so that you may in some way help to lighten the burden, so that you may in some way help to brighten the lives of those who are far removed from the many conveniences and the splendid educational institutions of our towns and our cities. Those who in the solitude of the isolated farm home are doing the work that is necessary for the common progress and prosperity of this country.

It was with these thoughts in mind that the Legislature of Ontario in 1923 paid the first bonus for rural construction. The first payment was for four hundred and twenty-five thousand dollars and in the following year, in 1924, that legislation was amended to practically double the legislative assistance. The result was that it so stimulated rural demands that, while previous to 1924 there was less than eight hundred miles of rural lines in the Province of Ontario, in the eight year period that has since elapsed the Power Commission has been building an average of three miles of rural lines every work day in the year, with the result that there are to-day over eight thousand miles of rural lines in the country serving over sixty thousand rural customers.

The effect of that legislation has been this, that, while previous to that period the service charge alone to the rural customer was about seven dollars a month, in 1930 the Legislature again passed legislation which authorizes the Commission to make a maximum service charge of two dollars and fifty cents and the Province of Ontario out of its revenues takes care of whatever deficit would be incurred. That means that the service charge in the eight years has been decreased by sixty-five per cent.

The Province of Ontario has handed over to the Power Commission for that purpose almost sixteen million dollars, so that the rural power customer finds to-day this remarkable situation, that in that eight or nine years he actually owns an interest in that sixteen million dollars of about sixty-five per cent.

Now turn to the other questions that your President has suggested; that is the purchase of power and matters that have been under controversy. He has suggested the Dominion Power and Transmission, but that has been dealt with so completely that I think it is clearly answered. I might say this of course; you understand from information which has been given out from time to time by the Power Commission that it had in mind the thought that the real value of these properties to the Commission lies in the fact that in the not distant future it would be developing there two hundred thousand horsepower with a peak power proposition instead of fifty thousand or sixty thousand horsepower as it is to-day.

But entirely aside from that, the Commission took over those properties on the 1st of January, 1930. It has not yet had a report from the auditors for the present year. But for the first twenty-two months of operation, from January 1, 1930, to the end of October, 1931, the report of the auditors disclosed—but perhaps I might point out the amount that was paid for the property. The Commission in purchasing this gave eight million dollars of five-year, four and one-half per cent bonds and thirteen million of five per cent bonds. Now the reason for that was it believed that it would be able in the five-year term of the bond to dispose of certain extraneous properties outside of the power properties. But the result of our operations for the twenty-two months disclosed that out of the earnings of the system it has paid the full interest charges upon the full twenty-one million dollars. It paid all operating and administration charges and taxes. It set aside one hundred thousand dollars for depreciation, and it still had fifty-two thousand dollars of surplus. The report of the auditors and the engineers was to the effect that after it had sold certain of these properties and revamped the power plant, the Commission would be able to have power in that area at, I think, a cost of eleven dollars and fifty cents. There is no possible way in the world that it could deliver power from the Queenston development at anywhere near that price.

Now turning to some of the contracts entered into by

the Commission in Quebec, I can only at best sketch the program very briefly. In 1923, when I first came upon this Commission, one of the first problems with which the Commission was dealing was a further supply of power. The Commission made the most exhaustive investigation of the cost of steam-power with the result it realized, if it could purchase power at a price, say, of fifteen dollars that it was infinitely preferable to building a steam plant; and so the Commission began negotiations in the Province of Quebec. While up to that time the Commission had been asked eighteen, nineteen and twenty dollars, it finally concluded an agreement with the Gatineau Power Company to deliver two hundred and sixty thousand horsepower at the Ottawa boundary at a price of fifteen dollars in 1930.

If you will go back and look at the situation, you will find that there are four plants operating at Niagara on the Canadian side: There is the Canadian Niagara Power Company, which is a private corporation developing one hundred thousand horsepower; there is the Electrical Development Power Co., and the Toronto Power and Electrical Development Co., developing about one hundred and twenty thousand horsepower and the Ontario Power Company, developing one hundred and eighty thousand horsepower, quite inefficient plants in the use of water. The Electrical Development Co., developed only about ten horsepower per cubic foot second and the Ontario Power Co., about eighteen horsepower. The Queenston plant develops thirty horsepower per cubic foot second.

Many years ago the technical men of the staff of the Power Commission had the dream of building the Chippewa Canal. It required not only vision but courage in that undertaking. When you realize that the men in charge of these affairs, the engineers of the Commission, are Canadian born, that they have been trained in the elementary schools and the Universities of this province, and have made such a tremendous success of this wonderful undertaking, it is something of which every Canadian citizen can be proud, that that type of men have been in charge of the technical affairs of the Power Commission,

and they are the men who are still in charge to-day. The Commission never enters into any important undertaking without the advice of those technical men. It was found in 1923 that the end of the power resources at Niagara was in sight, and so in 1927 and 1928 after the Commission had made arrangements for the purchase of the Gattineau Power, and believing it was absolutely impossible to secure power from the St. Lawrence before 1938 or 1940, it asked the technical men to prepare a program of what they thought would be the power supplies that would be necessary up to 1937. In June of 1924, the Commission had made application to the Government at Ottawa for authority to develop power upon the St. Lawrence. But up until the beginning of 1932 no progress was made. Since that time negotiations have been going on, as you well know, between the United States and Canada and, subject to ratification of that treaty by the United States, the Province of Ontario has entered into an agreement with the Federal Government for power upon the St. Lawrence River. You hear such sums spoken of as one hundred and fifteen million and one hundred and twenty million dollars, but that doesn't give you a clear picture of the reality. The Commission had arranged, I say, to purchase power supplies to carry it over the period until 1937. Now there is not any question that owing to this depression the provisions the Commission has made for power will perhaps carry it further along than 1937 but there is no other commitment made by the Commission for any other power. I believe the Province of Ontario has negotiated an agreement with the Federal Government, whereby certain things that have been in dispute over a long period of years, for instance ownership of the water-powers of the St. Lawrence will, under the terms of the agreement, be ceded to the Province of Ontario. But the Province of Ontario does not have to make one dollar of that payment until 1942, when out of the total amount involved the Province will then have to pay twenty-eight million dollars, that is, ten years from now. Then in the period between 1942 and 1945 the province must pay another thirty-nine million dollars, and in the

period which elapses from 1945 to 1952 the balance of the money is to be paid. So you can see what little risk the Province of Ontario is taking and what little provision has to be made for financing in the next twenty years.

In 1930 it was found that the power loads of the Commission were such that it was using every unit of power available at Niagara Falls and practically every bit of power secured from the Gattineau power contract. It has since then made commitments, not for the eight hundred thousand or nine hundred thousand horsepower you read of in the press, but for four hundred and seventy thousand horsepower, that is two hundred and fifty thousand from the Beauharnois, one hundred and twenty-five thousand from the MacLaren on the Lièvre River, and ninety-six thousand horsepower at Chats Falls, or four hundred and seventy-one thousand horsepower. That is to carry the Province over the intervening period which lies between now and 1937. Only thirty-five thousand horsepower was taken from the Beauharnois this year and it goes on in annual increment for the next five years. It is the same with the MacLaren Co. The Commission won't take delivery of any power until 1933. When people talk about the commitments of the Commission totalling ten millions a year, they do not realize that is to take care of the growth of power loads in Ontario until 1937.

PRESIDENT CHALMERS:—The picture our guest of to-day has given to us has demonstrated the importance of this subject to all of us, not so much because such a large percentage of provincial debt has been incurred on account of our investment in power projects, but because of Hydro's general importance. We appreciate very much the information you have given us to enlighten us on the principles that underlie the vast Hydro enterprise.