

would supply on the same terms and conditions as the Gattineau Company, but in the negotiations, the representatives of the Beauharnois Company definitely refused any concessions in respect to future requirements, stating that any equipment, the output of which the Commission did not immediately order and pay for, would be changed from 25 cycle to 60 cycle. In addition to this, the Beauharnois Company specifically reserved in its offer any rights it might have in respect to its former contract with the Commission. In other words, its offer was to sell power, and sue at the same time.

"Nor was there any provision in the Beauharnois offer for the additional line losses and the cost of line maintenance involved in the transmission of power from the Beauharnois plant to the Gattineau line. This is a distance of some 101 miles. Physical features are against the bringing of power to Toronto from a plant within 25 miles of the City of Montreal. The Commission has a single circuit line from the inter-Provincial boundary, where it meets with the Beauharnois lines near the St. Lawrence River. This line extends for a distance of some seventy-five miles till it forms a junction with the MacLaren lines at the mouth of the Livre River, and from there goes on to Chats Falls. From Chats Falls the power is then transmitted for something over 200 miles to Toronto. The carry is thus 301 miles, and the capacity of the line is at maximum, 150,000 h.p. The former Commission planned the construction of a new steel tower high-tension transmission line from the Beauharnois plant to the City of Toronto, at a cost variously estimated at from eighteen to

twenty million dollars. The present Commission has no intention of entering upon any capital expenditure of that amount, in order to make available in Toronto power, the natural market for which is the City of Montreal. As the Beauharnois Company has now issued a writ and commenced action against the Commission, no further comment is necessary in this connection.

"May I now endeavour to summarize what these new agreements mean, in actual finances, to the Niagara System. The Commission has actually been billed for power from the four Quebec Companies, for the year ending the 31st of October, 1936, the sum of \$7,936,892.70, for deliveries amounting at the end of the year to 619,000 h.p. Next year we would have paid to these same companies \$9,517,500 for a maximum of 706,000 h.p., at \$15 per h.p. As already stated, our full supply is 140,000 h.p., with a reserve sufficient for some years to come of 130,000 h.p., and this is provided at a cost of \$3,236,810.26, including all charges under the old contracts from the 31st of October until the 6th of December, 1935, when the former contracts were cancelled. It will thus be observed that the saving in power purchased for this year 1936, is \$6,280,689.74.

"A graphic way to illustrate the difference between the actual cost of power under the new agreements and what it would have been under the old agreements is to compare the actual payments for the current month of February, 1936, with what would have been the cost had cancellation not taken place.

"The gross charge for the purchase of power from the East this current month is \$282,333.34. Had the old contracts not been cancelled the charge would have been \$773,750.00. That is to say, we actually paid \$491,416.66 less than we would have paid under the old agreements.

"But it must be noted that included in the payment actually made is the cost of 100,000 h.p. used at Thorold for the generation of steam. This commitment terminates on May 1st next, so that there will be struck from the payment of \$282,333.34 the sum of \$90,479.17, the cost of the steam power, reducing the payment for May, 1936, to \$191,854.17. This is a little less than 25 per cent. of what we would have paid under the old contract. This is a saving of \$581,895.83. The saving alone is three times the amount we still pay.

"A saving of half a million dollars a month is startling, and it will continue and, in fact, will increase in subsequent years, due to the fact that deliveries under the old contracts are not yet complete.

"In the year 1937 deliveries would have been completed under the old contracts for the full year, and the cost of purchased power from the four Quebec companies would have amounted to the appalling sum of \$10,965,000 per year. In actual fact, and notwithstanding some increases in demand, we will, in that year, on the basis of the new contract, pay the sum of \$2,750,000.00, a saving in the cost of power purchased of \$8,214,500.00.

"Owing to anticipated increases in demand by the Commission's customers, it is expected that the cost of power from the Quebec Companies will amount in 1938 to \$3,245,000.00, a saving of \$7,720,000.00, and in 1939 to \$3,707,500.00, a saving of \$7,257,500.00. For the four years from 1936 to 1939, inclusive, our reductions in power costs as a result of the new agreements will amount to \$29,472,689.74. We have paid to the power companies in gross amounts from the year 1928 to the year 1935, inclusive, the sum of \$33,652,337.51, so that our saving in power costs during the next four years is thus approximately within \$4,000,000.00 of the total gross amounts paid to the four companies since the first horse-power arrived from the earliest Gattineau contract.

"In view of these sensational cuts in the cost of power, the question will naturally arise as to what benefit may be expected by the Commission's customers. The Commission has not been unmindful of the future, and during the past year has had prepared at considerable expense a very complete analysis of the power loads of Ontario, so that such steps may be taken to protect its requirements as circumstances appear to warrant. At best, however, any calculation as to future growth is a matter of prophecy, or, shall I say, opinion. No one can look far into the future, but this much seems clear beyond all peradventure, that the Commission will in the very near future be in a position to announce a reduction in its charges of power to the municipalities, in most substantial amounts. In this connection may I give the positive assurance that it is the policy of this Government to hand on to the power-users of our System such benefits as good management may warrant and its courageous battle against the excessive and unjustified exactions from the System may have secured.

"I should not close my report of the year's accomplishments in the Niagara System without some reference to the Commission's policy with regard to future power requirements. The experience of the last five years, and particularly that of the period in which the present Commission had held office, is proof beyond peradventure of the inadvisability of permitting the power requirements of the people of this Province to depend in any large measure upon supplies of energy from sources in private control, and still more clear is the experience as to the danger of depending for our power needs upon private companies, subject to the legislative jurisdiction of any other Province. There can be little objection to the purchase of moderate quantities which, were they at any time discontinued, would not result in a major disaster to the Hydro System and its customers, but to tie the System to supplies from beyond our borders in such large amounts that they cannot be readily replaced is to accept risks which are inadvisable and unnecessary. It is to lay the fires of discord and ill-will, and to invite disaster. Never again shall the Hydro Commission or the Province of Ontario permit its contracts for the purchase of power to be used by promoters as the basis for sales of stocks and bonds to the investing public. From now on the people of this Province should depend upon their own ability to produce and distribute. The principle of public ownership should be extended in Hydro matters and tenaciously observed, and above all things, Ontario must in the future own and control the courses as well as the distributing systems for its supply of power.

"In this connection it is interesting to note the actual conditions existing at the Niagara Cataract. Gattineau, be it observed, is 260 miles from the City of Toronto. Niagara Falls is less than eighty miles distant, and the Niagara plants are located in the very centre of an industrial community. How important is this matter of location is indicated in the experience

of the last year. Much has been said of the efficiency of the 220,000-volt transmission line from Gattineau to Toronto, and some calculations have been made public as to the amount of the line losses in electric energy, by reason of leakage and resistance. Experience is an apt teacher and the reductions in the supply during this year, from the Quebec plants, and the substitution of increased loads from Niagara have taught us much. Our actual practice has demonstrated that our line losses since the cutting off of the Eastern power and the substitution of Niagara power have been 26,000 h.p. less than they were under former conditions. At \$15 per h.p. this is a saving on line losses alone, by reason of our present arrangements, of \$390,000 per year.

"The Commission owns and operates three generating plants on the Niagara River. Two are at Niagara Falls and the other at Queenston. What is known as the Toronto plant was that which was taken over from the Toronto Power Company in the year 1920, and is situated above the Falls. Its efficiency is only 9.5 h.p. per cu. foot per second of water used. What is known as the Ontario plant was purchased by the Commission from the Ontario Power Company in the year 1916, and is situated in the gorge immediately below the cataract. It has an efficiency of 17 h.p. for each cubic foot per second of water used. The third plant is that which was constructed by the Commission at Queenston, and is fed by water conveyed from Niagara River via Chippawa Canal. Under normal conditions its efficiency is 29.6 h.p., or very nearly 30 h.p. for each cubic foot per second of water used. From these figures it is quite obvious that the efficiency of the Toronto plant is very low, being somewhat less than 1-3 per second foot of that at Queenston. The Ontario plant is better, but is still somewhat less than 2-3 of that of the Queenston plant. The opportunity for an engineering and construction program at Niagara is quite apparent from these figures, and in addition, considerable quantities of water may still be diverted into power channels without endangering the scenic beauty of the Falls. The policy of this Government is to free itself as rapidly as reasonably possible from entangling alliances with private power companies, and the policy of the Hydro Commission is 'Back to Niagara.'