

the resulting savings would be the largest, thereby providing a gradual evolution without undue financial requirements.

We will now proceed to apply the actual facts to the railways in our own particular province. From actual figures, of our railway operation, starting at Montreal and going east to our eastern boundaries, and figures now available from other electrifications, we can arrive at a comparison, which gives us an accurate idea of what the application of electric power would mean in the province of Quebec. Within our zone we have 15,000,000,000 ton of hauling done by our steam locomotives per annum. To do this requires over two and a quarter million tons of coal per annum, costing at present \$8.00 to \$10.00 per ton, the total

coal bill being from \$14,000,000. to \$15,000,000. This coal is purchased outside this province and has to be hauled from the mines on an average of 400 miles, which equals about 700,000,000 ton miles of 5 p.c. of the total ton miles of haulage per annum and is of course, non revenue haulage. To endeavor to make the comparison clear to those not familiar with railroading, I would say that all railway figures and costs are based on the ton mile for freight and train mile for passenger, the former is the number of tons hauled one mile, the latter is the number of miles run by passenger trains, I have here a comparison of several different railway divisions in this province and the C. M. & St. P., from which I will take the figures of most interest to you as follows:—

Freight service comparison one month:

	C.M. & St. P.	No. 1 Division	No. 2 Division	No. 3 Division	No. 4 Division
Gross ton miles.....	93,228,000	40,000,000	31,500,000	142,000,000	80,000,000
Train miles.....	58,014	38,000	29,761	128,227	60,904
Ton mile, train mile.....	1,605	1,050	1,040	1,100	1,330
Lbs. of coal per train mile.....	291	170	180	200	185
Cost at \$8.00 per ton.....	117.60	68c	72.0c	80c	74c
K.W.H. per 100 T. M.....	41.5	26	28	31	28
Cost at 1½¢ per K. W.H.....	52.80	32.5c	35.0c	39.0c	32.5c

	C.M. & St. P.	No. 1 Division	No. 2 Division	No. 3 Division	No. 4 Division
Passenger Service:—					
Train mile.....		19,850	26,564	80,480	21,164
Lbs. of coal per T. M.....	193	192	193	188	186
Cost at \$8.00 per ton.....	77.20	76.8c	77.2c	75.2c	74.4c
* K.W.H. per train mile.....	29.9	28	28	27	27
Cost at 1½¢ per K. W.H.....	37.40	35c	35c	33.4c	33.4c
Gross ton mile.....			12,629,936	37,617,820	
Ton mile T.M.....		420	476	470	450

Estimate for Year of all Railways East of Montreal to Provincial Boundaries

Passenger train miles.....	7,000,000
Freight ton miles.....	11,600,000,000
Passenger train coal used at 190 lbs. per train mile—tons.....	670,000
Cost at \$8.00 per ton.....	\$5,360,000

* Measured at Power Co's. incoming lines at sub-stations.