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SIR ADAM BECK AND THE HYDRO RADIAL PROPOSALS

by JOHN F. DUE

Sir Adam Beck is remembered today primarily as the founder of the Ontario Hydro-Electric System, but his interest in electricity was not confined to electric power as such; it extended to its use as a source of power for railways. During the period between 1912 and 1922, he developed and fought strenuously for plans for a system of radial electric railways in Ontario, centering on Toronto, which would have given the province one of the most modern passenger transport systems of the period. Unfortunately, as events developed, for the most part the building of the lines would have proven to have been a colossal blunder, but portions of several of them, if retained, would have aided materially in the solving of Toronto's present day traffic problems. While the traditional Ontario term of "radials" was used (this term has never been widely used with reference to electric railways outside Ontario), these lines were not to be interurbans of the typical variety, but were planned as high speed lines built to very high standards. The prototypes were the Chicago area roads, and, later, the International Railway's high speed line from Buffalo to Niagara Falls (completed in 1917), one of the best lines ever constructed in the United States.

Unfortunately (or perhaps fortunately), the radial plans became bogged down in a morass of political indecision and dispute so protracted that construction was delayed to a time at which it became evident that the lines could not be self supporting. The question became a major political issue, and the whole project became so confused that it is difficult to piece together the exact sequence of events; it became also a source of bitter recriminations which were to do serious harm to the prestige of Sir Adam Beck himself. In some ways, the history of the radial projects is highly reminiscent of current discussions of additional rapid transit facilities in Toronto - endless surveys, continuing disputes between various groups and persons involved, changes in plans, and inaction.

The Background

By way of introduction to the story of the radials, it is necessary to note briefly the picture of the interurban network of 1912. In the states directly south of Ontario there had developed between 1895 and 1912 a tremendous network of interurban lines connecting most of the major cities and towns. Ohio had about 2800 miles of line, Indiana 2000, and Michigan, Illinois, Pennsylvania and New York, although less completely blanketed, had very substantial mileages. The interurban had become a serious competitor of the steam railroad in the short haul passenger field, although most midwest lines handled only limited freight business. By contrast, western Ontario, in many respects similar to the area south of the lakes, had only a group of isolated lines, totalling about 360 miles (between 1912 and 1918 an additional 120 miles were completed or electrified, but 45 miles were abandoned). These lines can be outlined briefly:

1. The Windsor roads: lines owned by the Detroit United System extended to Tecumseh and to Amherstburg, and the Windsor, Essex and Lake Shore reached Leamington.
2. The Chatham, Wallaceburg and Lake Erie operated three lines out of Chatham: to Wallaceburg, to Painscourt, and to Erie Beach.
3. The London lines: the London and Lake Erie operated from London via Lambeth to St. Thomas and Port Stanley, paralleling the city-owned steam-operated London and Port Stanley, which was later (1915) electrified by Sir Adam Beck. The Woodstock, Thames Valley and Ingersoll operated between the two cities of its corporate name, but never reached London, as planned.
4. The Grand Valley lines: the Grand River, which became a Canadian Pacific affiliate, operated from Galt to Waterloo via Kitchener (known as Berlin before 1916); and the Grand Valley extended from Brantford via Paris and St. George to Galt. In 1915 another Canadian Pacific affiliate, the Lake Erie and Northern, completed its line from Galt to Brantford and Port Dover; it acquired from the city of Brantford the property of the Grand Valley above Paris, but did not use it; the city continued for some years to operate the Brantford-Paris line of the GV paralleling the L&N.
5. The Hamilton lines, all owned by the Dominion Power and Transmission Co., extending outward from Hamilton to Oakville (Hamilton Radial), to Brantford (Brantford and Hamilton), and to Beamsville (Hamilton, Grimsby and Beamsville).
6. The Mackenzie lines: two of these were owned, technically, by the Canadian Northern: the Niagara, St. Catharines and Toronto, serving major points in the Niagara Peninsula, and the Toronto Suburban, which ultimately reached Guelph from Toronto, but as of 1912 extended only to Lambton and to Weston (the Weston line was extended to Woodbridge in 1914). The other Mackenzie system was the Toronto and York Radial, with one interurban line to Lake Simcoe points, and two suburban lines, one extending into Scarborough terminating at West Hill, and the other from Sunnyside to Port Credit. None of these reached downtown Toronto, but terminated in the outskirts.

Apart from these roads there was only one other interurban in Ontario, the remote Nipissing Central, which connected Cobalt with New Liskeard. There were several suburban car lines.

Plans for Hydro Radials 1912-1917

In the period from 1905 to 1912, the Ontario Hydro-Electric Power System had developed rapidly, establishing itself against strong opposition as the first major successful public power project in North America, and by undertaking rev-

olutionary changes in power production and distribution had greatly reduced costs of power and brought rapid electrification of farms and small towns. The driving force behind Hydro was Sir Adam Beck, successful manufacturer, former Mayor of London and a member of the Conservative cabinet of the province, a man of great foresight and dynamic drive, if somewhat arrogant and quarrelsome, and characterized by some as ruthless in treatment of both enemies (of which he had many) and friends alike. Beck had a great personal following among the people of the province, but also a great capacity for antagonizing colleagues and provincial Premiers.

With the Hydro system securely on its feet, although by no means completed, Beck's attention turned to the development, under Hydro sponsorship, of a system of electric railways, which was designed to provide south central and western Ontario with a network of interurbans even superior to that of Ohio. Beck first publicly endorsed the development of a system of radials in 1912, pointing out that Hydro offered both rights of way and a source of power, and that the proposed system could bring great transportation advantages to both farmers and city dwellers.

In 1913 definite plans for Hydro radials commenced to take shape. The first serious proposal came from municipalities east of Toronto, for a line from Toronto to Markham, and thence to Uxbridge and to Port Perry via Brooklin. An additional line from Whitby to Brooklin was later added to the plan. The Hydro staff conducted an extensive survey of this line, the report being issued in November. Cities of western Ontario also commenced to show interest in a line from Toronto to Sarnia. In 1914, the basic legislation authorizing the building of radial lines was enacted, under the name of the Hydro Electric Railway Act of 1914. Briefly, it authorized the construction of electric railways in territory served by Ontario Hydro, through cooperative arrangements between Hydro and the municipalities involved. Steps in the procedure for the development and operation of the lines were as follows:

1. Upon request from municipalities in the area, Hydro would conduct a survey of the proposed line, estimating cost of construction, revenue, etc., and make a report, indicating, in the report, the allocated share of the construction cost for each municipality involved.
2. Each municipality would then submit to its voters a by-law approving participation in the project and providing for the issuance of debentures by the municipality for the allocated share of cost.
3. Approval of the agreements between Hydro and the municipalities by the province.
4. Financing of construction by the issuance of bonds by Hydro, secured in full by the municipal debentures. Provincial guarantee of the bonds was sought by Hydro.
5. Undertaking of construction by Hydro.
6. Operation of the line by Hydro, which retained power over rates, services, etc.
7. Meeting of any deficits by the municipalities.

Beck made it very clear that Hydro would approve only those projects which appeared to be self-supporting, and that any deficits would be borne by the municipalities, not the Hydro or the province.

During 1914 interest in the plans increased, particularly in western Ontario and the Georgian Bay area. Hydro made a detailed survey of electrification of the London and Port Stanley as approved by the voters of London in 1913, conduct-

ed other surveys of western Ontario lines, and encouraged local meetings to discuss the radials. In October of 1914 the plans for the lines east of Toronto were approved by the voters of 11 of the 13 municipalities involved (all except Uxbridge and Newmarket). Hydro proceeded with plans for these lines, and sought Federal subsidy.

In March of 1915 a large number of municipalities formed the Hydro Electric Railway Association of Ontario (under Hydro sponsorship) to further the development of the systems. The Association actively sought a provincial subsidy for the lines. Premier Hearst promised careful attention to the request, indicating that he favored the radial development but questioned the desirability of a subsidy. The Association and its various regional locals worked hard for the program and throughout western and central Ontario the question received extensive popular discussion.

throughout western and central Ontario the question received extensive popular discussion. By 1916 some 2100 miles of line had been proposed.

The next system to be submitted to vote by the municipalities involved (on Jan. 1, 1916) was the line extending from Toronto via Port Credit and Guelph to London, and, eventually, Sarnia (the London - Sarnia segment not being voted on at this time). Only Berlin and 3 small townships rejected the proposal. Beck still pushed for a subsidy, and sought provincial approval to go ahead with the plans. In April, however, the government warned that it had not approved the contracts with the municipalities on the London line, and that it would not encourage expenditures on radials during the war. The Radial Association complained, but, nevertheless, later in the year the government amended the 1914 Act to prohibit further expenditures on radials until the war was over. Thus action was stymied temporarily, but work on the plans continued. The Federal government informally promised a subsidy if one was given by the province.

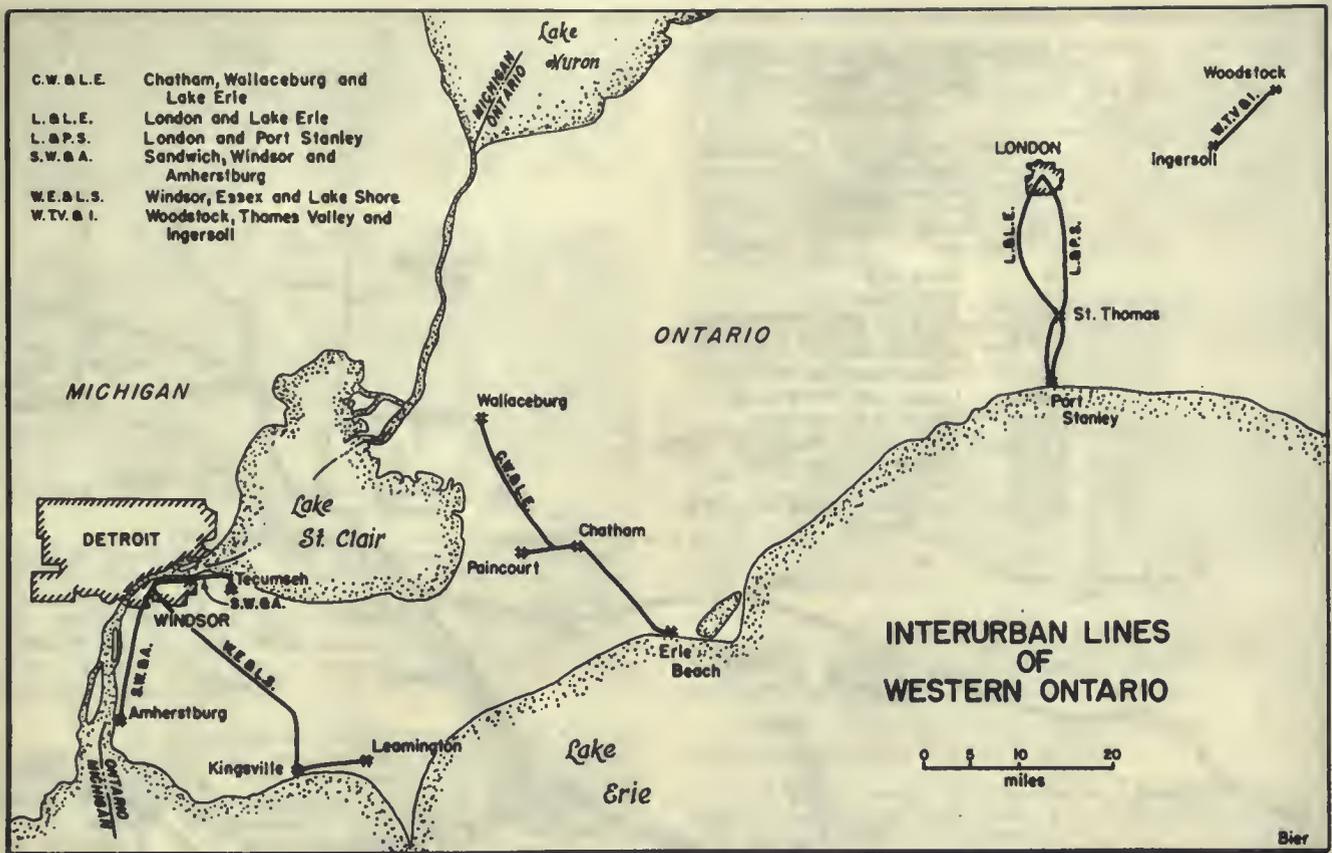
Plans for a third system were worked out in detail and submitted to the voters involved in January of 1917. This involved two lines, one extending from a junction with the proposed London line at Port Credit via Hamilton to St. Catharines, and another from Welland to Bridgeburg via Fort Erie. Hydro had in mind ultimate acquisition of the Niagara, St. Catharines and Toronto, which would link these two segments. All municipalities approved the Bridgeburg line, but three, including Hamilton city plus Nelson and Saltfleet townships, rejected the St. Catharines line proposal.

During the remainder of the war years, activity was confined to more detailed work on the plans for these three lines.

Postwar Changes in the Plans

During the war years, several developments occurred which resulted in substantial shifting of emphasis in the projects. One was the completion by the Toronto Suburban in 1917 of its line from Toronto to Guelph, duplicating the projected line to Guelph via Port Credit. A second was the undertaking by the Canadian Northern of the building of the Toronto and Eastern. This ill-conceived venture was an electric line extending from Toronto to Bowmanville via Oshawa, running along Kingeton Road (now Highway #2) for much of its length. This road was undertaken in order to lessen the opposition of Oshawa and other cities to the fact that the Canadian Northern's main line was built several miles north of these cities to minimize grades. To some extent this line would serve the same territory as the proposed eastern radial lines.

The third development was the purchase by the Dominion government in 1917 of the Mackenzie-owned Canadian Northern, bankrupted by its ex-



tensive construction of light traffic lines in the Prairies and its bitter struggle with the Grand Trunk Pacific. By this purchase the Toronto Suburban, the Toronto and Eastern, and the Niagara, St. Catharines and Toronto all passed into the hands of the Dominion government, and therefore might be available for purchase by Hydro. At the same time the development of the Canadian National system gave rise to the possibility of competition between CNR and radial lines; Beck was more than happy to compete with lines owned by his archenemy Mackenzie, but competition with the Dominion was another matter.

The general plans for construction of the radials were revived as soon as the war ended. The Radial Association, the municipalities, and Sir Adam renewed their efforts to get construction under way. Apart from the need for revision of plan for reasons noted above, there were two immediate obstacles: the failure of a few municipalities to approve the projects, and the hesitancy of the provincial government to approve the agreements and to provide subsidy, guarantee of the bonds, or both. Neither subsidy or guarantee were essential, but would have greatly facilitated financing. The position of the province was by no means clear; it had approved the 1915 agreements on the Port Perry line and had made commitments on the St. Catharines line, but showed considerable reluctance to take any positive steps to aid in the initiation of construction.

Some progress was made in tackling these obstacles. A revote in Hamilton carried by a 2 to 1 margin, and Nelson likewise approved; only Saltfleet again rejected participation in the St. Catharines line. Other cities involved proceeded to issue debentures and deposit them with Hydro, a step which they would later bitterly regret. The government cooperated to the extent of repealing the 1916 Act, thus permitting the initiation of the projects, but it was still reluctant to make the guarantee of the bonds, despite Beck's pleas, and it compelled resubmission of both the London and St. Catharines projects to vote by the municipi-

ties, because of the need for them to accept their share of the portion of the total cost originally assigned to municipalities which refused to approve the plans. For the most part reapproval was obtained, but Guelph refused to do so, and held up plans for the London line. The plans for the eastern lines, the first to be developed, were now completely reconsidered because of the possibility of obtaining the line of the Toronto and Eastern. By August of 1919 Beck himself showed some pessimism in light of the obstacles in the way of actual construction, but Hydro nevertheless continued work on the plans, upon negotiations for purchase of the Toronto and Eastern, and upon the development of plans for an additional route from Hamilton to Guelph and to Elmira.

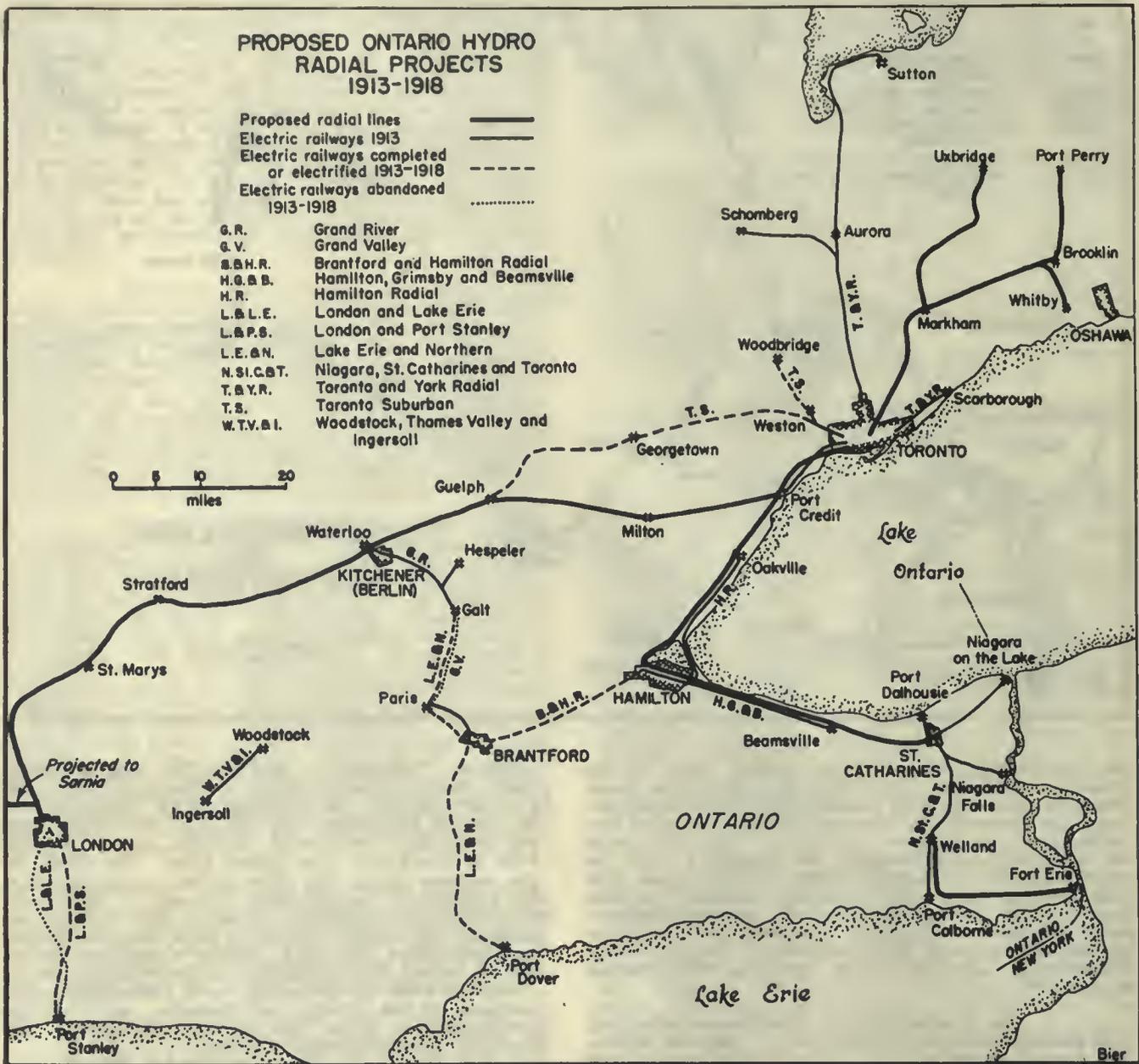
In the Fall elections, the radial plans were dealt a serious blow, when the United Farmers party of E.C. Drury defeated the Hearst government. While Hearst had not been enthusiastic about the radial plans he had not opposed them and in a pre-election speech stated that he favoured building the lines; he would simply not push them or provide provincial subsidy. But Drury was known to be very skeptical, and the United Farmers Association had indicated by a resolution that it viewed the radial plans with alarm, and urged the Legislature to go slowly. Drury, however, in December of 1919, indicated that there was no friction between himself and Sir Adam Beck (although relations could hardly have been called cordial), but went on to point out that the establishment of the Canadian National had altered the situation materially, and necessitated careful reconsideration of the plans.

Hydro, nevertheless, went forward with the plans, but now shifted emphasis from the three original projects to ones of more limited regional scope, and involving greater use of existing lines in the areas. The Port Perry project was replaced by one calling for completion of the Toronto and Eastern; the London line was shelved in favor of the Hamilton - Elmira line and acquisition of the Toronto Suburban; the Toronto - St. Catharines line was included in the project and supplemented by a

PROPOSED ONTARIO HYDRO RADIAL PROJECTS 1913-1918

Proposed radial lines ————
 Electric railways 1913 ————
 Electric railways completed
 or electrified 1913-1918 - - - - -
 Electric railways abandoned
 1913-1918

G.R.	Grand River
G.V.	Grand Valley
S.B.H.R.	Brantford and Hamilton Radial
H.G.S.B.	Hamilton, Grimsby and Beamsville
H.R.	Hamilton Radial
L.L.E.	London and Lake Erie
L.P.S.	London and Port Stanley
L.E.N.	Lake Erie and Northern
N.S.C.S.T.	Niagara, St. Catharines and Toronto
T.S.Y.R.	Toronto and York Radial
T.S.	Toronto Suburban
W.T.V.A.I.	Woodstock, Thames Valley and Ingersoll



plan for acquisition of the Niagara, St. Catharines and Toronto.

On January 1, 1920 the Hamilton - Elmira line was submitted to the voters, and all municipalities except West Flamboro approved it. By February all municipalities involved in the Toronto and Eastern acquisition had approved the plan (although it was later discovered that an insufficient number of persons had voted in York). In June, Drury assured the municipalities that a provincial guarantee of bonds would be forthcoming once he was convinced that there would be no duplication with present lines and that the radials would be self-supporting.

In the same month Beck obtained a tentative option from the Dominion on the three roads which the Canadian National had inherited from the Canadian Northern - the Toronto Suburban, the Toronto and Eastern, and the Niagara, St. Catharines and Toronto, and requested provincial approval of the purchase. On July 6, Drury flatly refused to give his approval, and announced the appointment of a Commission to make an inquiry into the radial plans, indicating in detail his reasons for doing

so - the heavy Hydro borrowing for other purposes, the financial difficulties of electric lines in the U.S., the development of the CNR, and the highway construction program. Beck bitterly protested, pointing out the commitments already made by the province in validating bonds and approving agreements. But all action was stopped pending report of the Commission.

The Sutherland Commission

The Commission, which consisted of five members, none of whom had any direct experience with the electric railway industry, was known

The Commission, which consisted of five members, none of whom had any direct experience with the electric railway industry, was known as the Sutherland Commission, for its chairman, Mr. Justice Sutherland. Attention was concentrated on the network planned for immediate development, which included about 325 miles, only 125 miles of which involved completely new construction. There would be five lines in the initial system:

1. The Toronto and Eastern, which would

be acquired and completed to downtown Toronto via the east Don Valley and the waterfront. As of 1917 the T & E had completed grading from Bowmanville to Pickering, and had laid rails from Bowmanville as far as Whitby. No overhead had been installed, and no cars had operated as yet. The Dominion government stopped construction completely when it had acquired the road in 1917 and no additional work had been done.

2. The Toronto, Port Credit and St. Catharines, to be built from Toronto via Hamilton to St. Catharines, 72 miles. The route would follow the Toronto waterfront, pass through the CNE grounds to Sunnyside, and thence extend through Port Credit, Oakville and Hamilton (along Grand Trunk right of way in the latter city) to St. Catharines. Two alternate plans were proposed, one involving use of the existing Hamilton-Oakville and Hamilton-Grimsby lines of the Dominion Power and Transmission Company, the other involving new lines paralleling these if Dominion Power would not sell them at acceptable figures.

3. The Niagara Central, to be formed through acquisition from the Dominion government of the Niagara, St. Catharines and Toronto. Some modernization of this property, which connected St. Catharines with Port Dalhousie, Port Colborne, Niagara Falls, and Niagara-on-the-Lake, was planned. These lines would provide a connection with the New York lines.

4. Hamilton-Galt-Kitchener-Elmira line. A new line would be constructed from Hamilton via Copetown to Galt, and the Grand Trunk line from Galt to Elmira via Kitchener acquired and electrified, as well as the Grand Trunk line from Preston to Guelph.

5. The Toronto Suburban, another existing interurban which had fallen into Dominion government hands along with its parent Canadian Northern, would be acquired. This route extended from Toronto to Guelph, with another line to Weston and Woodbridge, but lacked a good entrance into Toronto; under the plans it would be brought to Sunnyside in part via the old Belt Line, and thence into the downtown area via the proposed harbour line.

As the formal plan was developed, it made no provision for inclusion of the Yonge St. line to Lake Simcoe, owned by the Mackenzie interests, the Hamilton-Brantford Radial, or the Canadian Pacific electric lines in the Grand Valley. However, the plan was regarded only as an initial one; not only might other existing routes be included, but additions were planned, including a Kitchener - London line, once the initial pattern proved successful.

Several features of the proposed routes were stressed:

1. All lines would be built or rebuilt to high standards, with 80 pound rail and private right of way operation, patterned after the International Railway's new high speed line from Niagara Falls to Buffalo.

2. The importance of a high-speed entrance into downtown Toronto was recognized, with plans for utilizing a right of way along the harbour. Initial plans called for a terminal at the foot of Bay Street but were revised to include a subway up Bay Street to Queen, in the heart of the downtown area.

3. Both freight and passenger service would be provided, with development of through carload freight in conjunction with connecting steam lines.

The Commission undertook a very careful study of the project over a ten month period, compiling some 27 volumes of evidence, and publishing

in 1921 a report of 250 pages. Testimony was obtained from a wide range of persons, including a number of interurban officials in the United States. In order to strengthen its case, Hydro had during 1920 employed Bion J. Arnold, perhaps the best known electric railway consultant in the United States, to make a survey of the project. While he disagreed with some of the cost and revenue data, and suggested the extension of the lines up Bay Street from the waterfront via a subway, he endorsed the project, indicating that it would be self-supporting.

Despite the Arnold endorsement, the Sutherland Commission concluded that the development of the proposed system was unwarranted. Specifically, the report noted the following:

1. The financial condition of electric railways in both Canada and the United States was so unsatisfactory and the future appeared so bad that the radials should not be built unless there was strong evidence that they would be self-supporting, particularly in light of the fact that new roads would cost much more to build than present ones. Virtually no new lines were being built in the United States.

2. No evidence of such self-support could be presented; the Commission believed that Hydro had underestimated operating costs and overestimated potential revenues.

3. The new lines would in part compete with the Canadian National system.

4. Heavy expenditures on the Chippawa hydro-electric project made it particularly unwise for the province to guarantee \$45 million of radial bonds, and municipal debt had grown rapidly.

5. Provincial endorsement of the bonds would set a dangerous precedent, leading to demand for additional support from the province for other local projects, radial and otherwise.

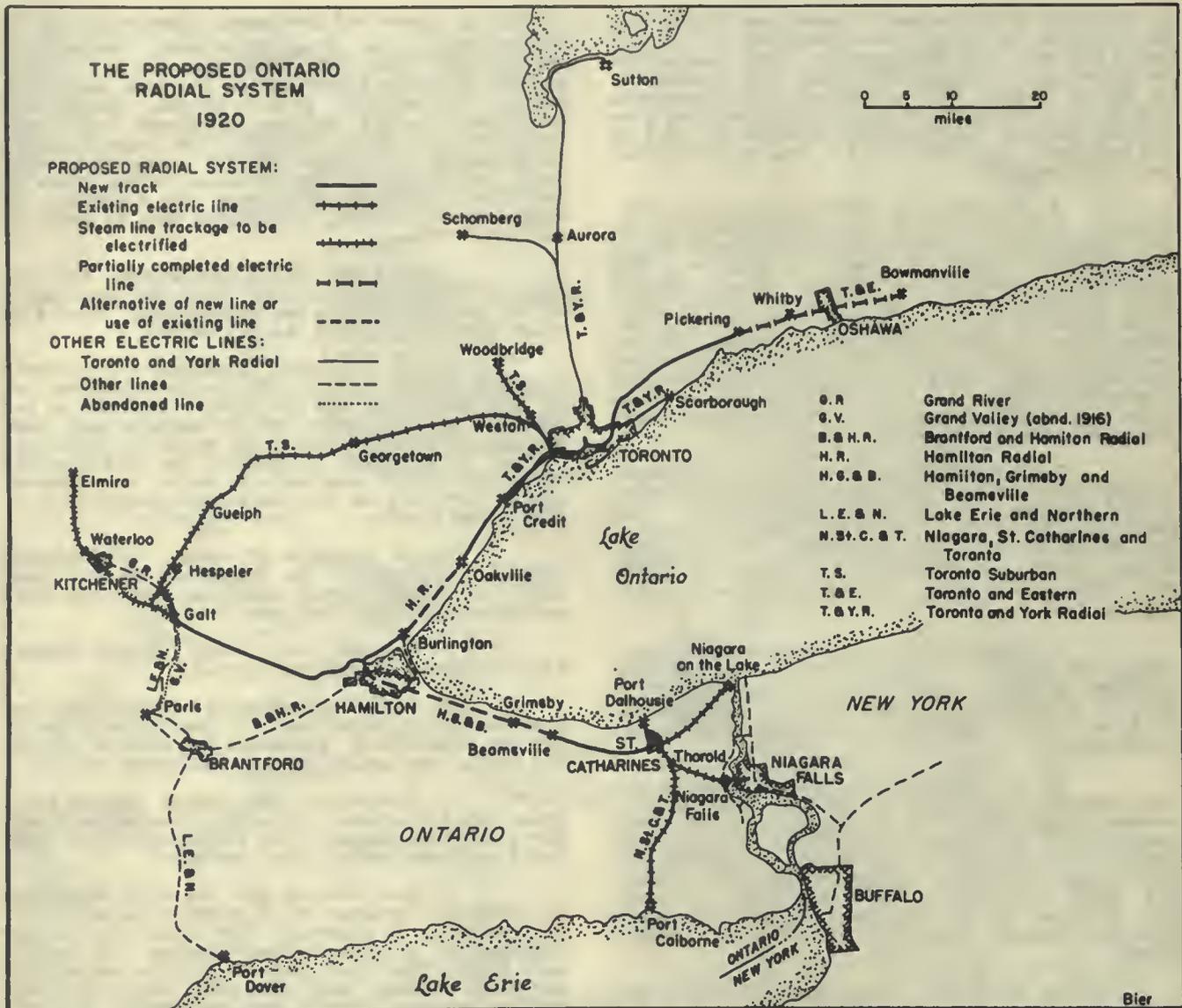
6. The province had recently undertaken an extensive program of highway development; it was desirable to ascertain the effects of the new highways on electric railways before the radials were built. The report pointed out the competition which had already developed with existing lines, and the effects which it had upon traffic and revenue. Testimony of officials of various lines in the United States was very convincing on this score.

Apart from the general conclusions, the Commission criticized Hydro for its failure to obtain the assistance of men experienced in the electric railway field in making its estimates of costs and revenues, and condemned the close relationship between Hydro and the Radial Association formed by municipal officials.

The Commission did note, however, that some circumstances were favorable to the proposals, particularly the limited passenger service in the area, and the high standards proposed for the lines, with a high speed entrance into Toronto.

While condemning the general plan, the Report called attention to the fact that the portion of the plan involving lines into downtown Toronto from suburban areas offered significant advantages, but suggested that they should be developed by the city in conjunction with the Toronto transit system, not as a separate project under Hydro control. On the basis of proposals made by one of the witnesses, Vice President F.P. Gutelius of the Delaware, Lackawanna and Western (a former Canadian Government Railways official in the Maritimes) the report offered the following suggestions for such a limited system:

1. A portion of the Toronto and Eastern right of way would be used to bring a suburban



rapid transit line from the east into the city; the inner portion of the line would follow the east Don Valley and the waterfront to Bay Street.

2. The existing Port Credit line would be brought into the downtown area via the proposed waterfront rapid transit route from Sunnyside.

3. The Toronto Suburban would be brought down the Humber to connect with the Port Credit line at Sunnyside.

4. The Toronto and York Radial's line to Lake Simcoe would be brought downtown via Sunnyside, or via a connection to the Toronto and Eastern line on the east.

The remainder of the Toronto and Eastern would be abandoned or turned over in part to the Oshawa Railway. The Port Credit line might be extended to Oakville and thus linked up with the Hamilton system, to provide a through link.

A minority report was filed by one member, Fred Bancroft, the representative of labor on the Commission. Bancroft approved the project in principle, and stressed the difference between the proposed lines and the typical United States interurban, often poorly built and over-capitalized. He dismissed truck competition with the statement "If the freight traffic on the highways has to pay its fair share for the upkeep of the highways, the

electric railways will not be affected by competition of motor trucking."

The report was, of course, highly unpopular with Sir Adam Beck, and in typical Beck fashion he issued a pamphlet, entitled Statement re Sutherland Commission Majority Report, in which he defended his proposals, and stressed the urgent need for the radials, which he argued would provide the only solution to the transportation problem in the area. He dismissed trucks as economically impractical, stating that typically they were not covering their expenses even when they did not have to pay for highway costs. He stressed several major points:

1. The Sutherland Commission members had no knowledge of the subject, and chose the wrong experts from the United States, particularly steam railroad men who were prejudiced against the use of electricity, and electric railway men not familiar with the radial type of line; by contrast, Arnold was a recognized expert in the field.

2. The charge of duplication with the Canadian National was regarded as absurd, because of the difference in the type of service.

3. The superiority of the proposed radial lines, with high speed entrances into Toronto, private right of way, and stress on both freight and passenger service was emphasized. The high



The London and Port Stanley Railway was electrified in accordance with the technical recommendations of Sir Adam Beck and the Hydro Commission. This railway therefore probably conveys a good impression of the nature of the Hydro Radials had they reached fruition.

construction cost was defended on the grounds of the need for high quality service and the inadequate standards of existing lines. The cheap power and the avoidance of overcapitalization relative to the United States situation were also noted.

The Death of the Plan

The Sutherland report struck the radial plan a major blow, by strengthening the opposition of the provincial government and raising doubts on the part of some municipalities. But Beck was unwilling to give up the fight, and his continued agitation was to result in serious recriminations and bitterness.

A week after the report was released, Premier Drury announced that the province would not guarantee radial bonds, but municipalities would be permitted to go ahead with radial plans if they wished, without provincial support. Early in 1922 the Toronto and Eastern proposal was re-submitted to the municipalities and approved by all - despite the Sutherland report - but with a close vote in Toronto. In March of 1922, the legislature, on Government initiative, repealed the 1914 Act, and replaced it by the municipal Railway Act of 1922. The new Act provided that municipalities could build radial lines provided that they issued bonds themselves for the purpose (without provincial guarantee). They could operate the roads directly, or contract with Hydro to do so. The system of Hydro issuance of bonds secured by municipal indentures was discontinued, and the potential overall role of Hydro greatly reduced. Because of prior commitments, however, the Toronto-St. Catharines line and the Sandwich, Windsor & Amherstburg were exempted from the change, being still subject to provisions of the 1914 Act, but re-submission of this proposal to the municipal councils, and to the voters upon application of 15% of the rate payers was required. Most of the councils reapproved, but four, including the city

of Hamilton, rejected the proposal. The final blow was dealt on January 1, 1923, when the voters of Toronto rejected the proposal (after the council had approved it) re-submitted to them on the basis of a court order. This was one of the most bitterly fought of all municipal elections in Toronto. The opponents centred their attack on the "water-front grab" argument, that the city was losing to Hydro the control of the waterfront route of access. The newly-formed (1921) Toronto Transportation Commission was itself not too enthusiastic about the radial plans because of the loss to the city of good entrances for rapid transit lines, and the fact that Hydro plans ignored city lines.

The basic plan for a Toronto-St. Catharines line was now dead, in view of these rejections. The cities between Oakville and Toronto, however, sought the building of the line between Toronto and Oakville, or at least a connection from Fort Credit to Oakville, though they preferred a high speed line to Toronto. The Drury government approved these plans, and construction by Hydro was authorized. In the Fall of 1923, however, the Drury government fell; the new government was completely unsympathetic, and the whole plan collapsed.

Meanwhile, in 1922, the cities involved in the Toronto and Eastern abandoned their plans for a radial and instead pressured the Canadian National to complete the Toronto and Eastern. In 1923, to the surprise of many people, the Canadian National agreed to do so, and to link the T & E with the Toronto Suburban by a line using the right of way of the old Belt Line around the north side of Toronto. Work was resumed on the T & E late in 1923, the original portion was placed in operating condition, and rails laid between Whitby and Pickering. By April of 1924 there were rumors that the project was being abandoned again; these were denied by the CNR. Construction into Toronto was held up pending decision on a route. In 1925 construction was stalled completely, and CNR off-

icials were evasive in response to questioning in the House of Commons. The increase in motor transport had by now made it obvious that the line could not be profitable, and the government was unwilling to provide additional capital for lines which were likely to increase the CNR's deficit. In 1926 the project was abandoned and the tracks were torn up. The old Toronto Suburban line to Guelph was operated by the CNR until 1931, when it was abandoned. Of the three electric lines inherited by the CNR in Ontario, only the Niagara, St. Catharines and Toronto was retained; passenger service was gradually reduced, but as of 1958 was still operated on the Thorold-Port Colborne line, the last strictly interurban passenger service in Ontario.

A long wrangle developed between the municipalities and Hydro over the return of the debentures issued by the municipalities and deposited with Hydro for the building of the Toronto-St. Catharines line. Hydro refused to return these until the municipalities paid their share of the amounts spent for surveys and other purposes relative to the line. The provincial government backed Hydro, and the city of St. Catharines sued and lost; an appeal to the Privy Council likewise was lost.

While none of the lines included in the 1920 radial network were ever built, Ontario Hydro did get into the interurban electric railway operating field. In 1920 the municipalities in the Windsor area had bought the urban and interurban lines owned by Detroit United and had contracted with Hydro for operation of them, under the terms of the 1914 legislation. In 1930 the cities formed the Sandwich, Windsor and Amherstburg Railway, which took ownership of the lines, but operation by Hydro continued until 1934, when by mutual consent the contract was terminated and the municipally owned company took over operation.

Similarly, in 1921, when the city of Toronto acquired the properties of the Toronto and York Radial as a part of the "clean up" deal of Mackenzie properties in the area, it contracted with Hydro for operation of the lines, with the city meeting the deficits. In 1927, in an effort to reduce losses, the city took back the operation of the lines. Ultimately the Lake Simcoe and Scarborough lines were abandoned, and the Port Credit line cut back to Long Branch, to which a city car line still operates.

In 1929, Hydro took over the operation of the Windsor, Essex and Lake Shore, which had been purchased by the municipalities in the area from the private owners to forestall abandonment. The road was modernized and new equipment purchased, but to no avail; in 1932 it too was abandoned.

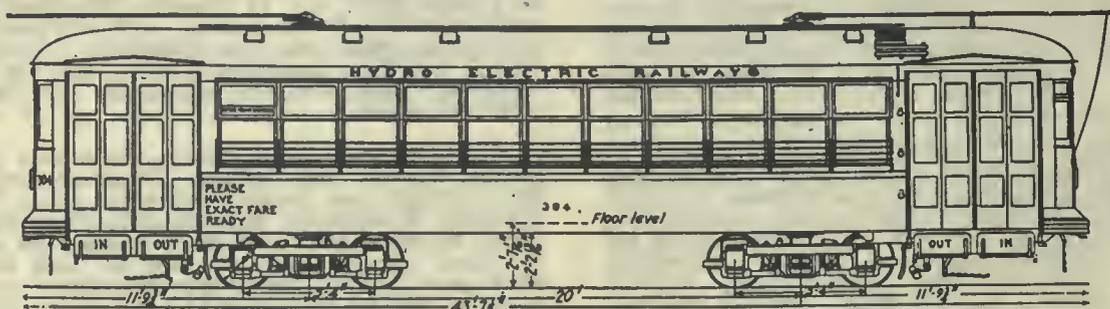
The last electric railway properties to be acquired by the Hydro were the Hamilton lines, taken over with the entire assets of the Dominion Power and Transmission Company in 1930. Little time was lost in abandoning the two remaining interurbans, the Brantford and Hamilton and the Hamilton, Grimsby and Beamsville (in June, 1931), but the Hydro remained as operator of the local street car system of the Hamilton Street Railway until as late as 1946, when it was purchased by local interests.

Meanwhile, in 1925, harrassed from all sides, and particularly by an investigation arising out of the embezzlement of Hydro funds by his private secretary, Sir Adam Beck died - and with him the last hope of a radial system.

A Brief Evaluation

The story of the radial plans is one of frustrations, of "almosts" and "might have beens". Several obvious factors played a major role in preventing construction - World War I; the fall of the Hearst government; the tendency of Sir Adam Beck to antagonize provincial premiers; the spread of Hydro activities in too many directions, with constant changing of plans; the formation of the Canadian National system; and a basic defect in the Beck-conceived 1914 legislation - the requirement for universal approval by the various municipalities, and the lack of a workable system of handling cases in which a few held out. Had this problem been avoided by formation of radial districts, some lines might well have been built; or, in spite of this problem, some might have been built had not the war intervened, or the Drury government elected. Or, had Hydro undertaken the building of the lines itself in 1913, as it might well have done, progress would have been much more rapid - but in this instance Beck displayed untypical caution. These various obstacles held up construction until the development of the automobile had essentially rendered the plans, as a whole, obsolete.

As of 1912, given the transportation picture in the province and the state of development of the automobile, there was clearly justification for some of the lines - particularly the St. Catharines and London routes. The Port Perry route would almost certainly have been a failure even had conditions remained unchanged. By 1920 the automobile had developed to the point at which it should have been obvious that even the best of the long-distance lines proposed could not have been profitable. The Sutherland Commission report, of course, proved to be correct; had the lines been built, for the most part they would almost certainly have been abandoned, at least for passenger service, long before their costs had been recovered. As freight carriers they would merely



Although no part of Beck's Radial project ever materialized, the Hydro-Electric Power Commission of Ontario was nevertheless at one time a major electric railway operator in southern Ontario. It operated at various periods, on behalf of the owners, the Guelph Radial Railway, the Toronto and York Radial Railway and the properties at Windsor, and owned the railway system at Hamilton from 1930 to 1946. In a modernization program several car groups were purchased, including cars 301-304 for the Sandwich, Windsor and Amherstburg Rly.

have diluted the business of the CNR and the CPR. The question may be asked why Sir Adam Beck continued to fight for the projects to the bitter end. One associate of his suggests that in part he was misled by his engineers, who were strong believers in the "auto is a fad" doctrine, and that in part it can be attributed to his tenacity in fighting for a cause when opposition developed.

Despite the fact that the system as a whole would have proven to be a failure had it been built, the portions of the lines which would have constituted rapid transit routes into downtown Toronto from suburban areas, terminating in a subway up Bay St. to Queen, would have made impor-

tant contributions to the solution of metropolitan area transit problems. It is this type of service for which rail passenger vehicles are best suited. These were, of course, the lines which the Sutherland Report suggested as suitable for development by the city. It is doubtful if even these lines would have been profitable, at least after 1929, but they would almost certainly have proven to be justifiable if their contribution to the relief of traffic congestion is taken into consideration; they would have offered far better service to suburban areas than that which is available today. Unfortunately, the construction of such lines is still of the future.



Monument to Sir Adam Beck on the centre mall of University Avenue, Toronto, just south of Queen Street.

