



STATEMENTS AND SPEECHES

INFORMATION DIVISION
DEPARTMENT OF EXTERNAL AFFAIRS
OTTAWA - CANADA

No. 57/16

CIVIL AVIATION IN CANADA

An address by the Hon. George C. Marler, Minister of Transport, to the Canadian Shorthorn, the Canadian Aberdeen-Angus and the Canadian Hereford Associations, London, Ontario, February 19, 1957.

...Civil aviation for commercial purposes began shortly after the First World War. After the initial enthusiasm for exhibition flights and pleasure flying had subsided, aviation settled down to serious pursuits.

It was not long before it was discovered that aircraft were exceedingly useful for the protection of our forests and for aerial surveys, and as early as 1920 aircraft were being widely used for these purposes. A short time after, in the autumn of 1921, the discovery of oil in the Mackenzie River basin led to the first attempt to establish air transportation on a large scale in the Far North. Later on, in 1924, Laurentide Air Services inaugurated the first air transport service for passengers and goods to meet the needs resulting from the expansion of the mining industry in north-western Quebec.

Starting from these humble beginnings, commercial aviation expanded rapidly, though this expansion was more spectacular in the north than in the more settled parts of our country. This is easily explained. In most cases transport by alternative means was difficult, costly and slow over the long distances to be covered, whereas transport by air was facilitated, and indeed stimulated, by the very geography of the north. The lakes, with which our north country is dotted, afforded ideal landing places for aircraft equipped with floats in summer and skis in winter, and for this very reason flying in the north expanded rapidly and rendered an increasingly valuable and economic service.

The situation was very different in the older and more settled parts of Canada, where the conventional means of transportation were well established and in some places even over-developed. To these parts of our country, the only advantage which air transport could offer - a saving of time - necessitated the organization of a network of ground installations costing substantial sums. For these reasons, the development of

interurban services had been left in abeyance until progress elsewhere had given a clearer and more definite indication of their usefulness. This was not too long in developing.

By 1927 the success of interurban air services in Europe and the continued expansion of the airway network in the United States moved the Canadian Government to reconsider its policies. With a view to establishing a chain of airports across the country and of training personnel, the Federal Government initiated the flying club movement by offering subsidies and gifts of aircraft to flying clubs. The airports built by them pursuant to this policy and by municipalities under other arrangements constituted the nucleus of the trans-Canada airway. The Government made the further contribution of undertaking to build at its own expense the intermediate airports, and of installing the lighting systems and providing the meteorological and radio services. The establishment of a chain of airports from the Atlantic to the Pacific, however, was a formidable task because of the distances involved and the economic conditions of the times; and it was only in 1939 that the last segment of the trans-Canada airway, that between Montreal and the Atlantic coast, was finally completed.

While this development was going on, the Government took another important step when in 1937 it introduced a measure providing for the organization of Trans-Canada Air Lines, with a view to establishing an air service from one end of the country to the other. Considering the remarkable progress that has since been achieved by TCA, it is interesting now to read what was said in the House of Commons when this legislation was being debated. The then Leader of the Opposition, the Honourable R. B. Bennett, warned the Government against trying "to keep up with the Joneses", if I may use Mr. Bennett's very own words. But whatever may have been the doubts which existed at that time - and it is not surprising that there were doubts - what has happened since establishes very clearly that Canada did not undertake something that exceeded her capacity.

Continual Expansion

In fact, since 1937 there has been a continual fanning out or expansion of air services in Canada. I shall not tire you with a tedious account of what took place in the many different parts of our country. It will be sufficient if I merely remind you that TCA has provided and continues to provide the trans-continental service, but that at the same time it serves a large number of centres of population which are not located on the trans-continental airway, while the lateral, or regional, routes are served by a number of privately owned companies. Of these I may mention particularly: Canadian Pacific Air Lines Limited, or CPA, which operates scheduled services in the west and in northern Canada over a network of approximately 10,000 miles in length. They fly from Vancouver to Whitehorse and Dawson City in the Yukon; from Edmonton to Yellowknife and on

to Aklavik, on the shores of the Arctic; from Regina to Saskatoon, Prince Albert and Edmonton; and from Winnipeg to Flin Flon and Churchill. Trans-Air, formerly known as Central Northern Airways, operates routes from Winnipeg and Red Lake. Pacific Western Air Lines serves a number of other routes in British Columbia, and a subsidiary provides services in northern Alberta. Maritime Central Airways meets the needs of the Maritime Provinces, while Quebecair operates in the Lower St. Lawrence and provides a link between the Lower St. Lawrence and the capital city of Quebec.

In addition to these scheduled services, there are 229 operators who work from bases all across Canada and provide service to individual clients, generally within a relatively restricted area.

In addition to these domestic services operated exclusively by Canadian carriers, there are a number of trans-border services. Some of these are operated exclusively by one carrier, but those on which the traffic is heaviest - between Montreal and New York, and between Toronto and New York - are operated by TCA in competition with Eastern Air Lines at Montreal and with American Air Lines at Toronto. As Canadians, you will be glad to know that though the two American carriers I have just mentioned are giants of the aviation industry, our own airline, TCA, carries more than half of the traffic on these two routes.

Canadian carriers operate other services. You may travel by TCA to Florida, to Bermuda and the Caribbean, while CPA will take you either from Vancouver or Toronto to Mexico City and even to the distant parts of the western coast of South America.

Canada is also well provided with service across the Atlantic. TCA has a daily flight to London, England, with one flight per week continuing on to Paris and another to Dusseldorf, Germany, and this frequency is increased during the summer, while service from Montreal is also provided to Paris by Air France, to London by British Overseas Airways, to Amsterdam by the Dutch line, K.L.M., and to Germany by Lufthansa. A further service between Toronto, Montreal and Lisbon to be operated by CPA in connection with its service from Mexico City was authorized last week by the Government.

Canada is also well represented in the Pacific. CPA has a service between Vancouver, Tokyo and Hong Kong and another between Vancouver, Hawaii, Fiji, Australia and New Zealand. This company in 1955 inaugurated a service across the polar regions between Vancouver and Amsterdam, thus establishing between Europe and Australia on the one hand, and between Europe and the Far East on the other, an integrated service, free from the red tape and formalities which irritate passengers and delay the movement of air freight. CPA was not the first carrier to operate a regular service over the polar regions; this honour rightfully belongs to the Scandinavian Air lines which, in November, 1954, inaugurated a weekly service between Los Angeles

and Copenhagen over a route involving refuelling stops at Winnipeg and in Greenland.

The existence of these services across the Far North serves to emphasize the geographic importance of Canada in international aviation, and the popularity of the two services which I have mentioned suggests that other similar services are likely to be established some time in the future.

I think I should point out that as a rule international services are established only after the negotiation of a bilateral agreement between Canada and the other country concerned. Upon our part, we do not grant traffic rights in Canada unless we receive in exchange traffic rights in the other country which we consider of equal value, and it is no longer our policy to grant to a foreign carrier the right to serve more than one point in Canada or to operate a service in Canada.

Remarkable Growth

This summary description of the routes now served by Canadian carriers gives you a good idea of the development of air services that has taken place in Canada since 1937 when the Government decided to establish a service from coast to coast. Now I don't want to burden you with a lot of statistics, but I would like to give you in capsule form just a few figures to show the remarkable growth that has taken place during a relatively short period:

Passengers: 1936 - 125,000; 1946 - 525,000; 1949 - 1,040,000; 1953 - only four years later - 2,273,000; and 1956 - an all-time record of about 3,300,000. Mail: 1936 - 1,000,000 lbs.; in 1956 about 27,000,000 lbs. Freight: 1936 - 25,000,000 lbs.; 1956 - which includes a substantial volume of supplies for the DEW Line - about 300,000,000 lbs.

I am sure that you appreciate that this remarkable expansion has set a pace which has been difficult to follow. While it was going on, larger and faster aircraft were being produced, better and more complex electronic equipment was being devised, and the weight of our responsibilities in the field of aviation continued to become heavier.

Let me illustrate what I mean.

Take first the runways from which the aircraft take off and on which they land. In 1937 a runway 3,500 feet long was entirely adequate for the aircraft of those days, whereas in the last few years it has been necessary for us to build runways 6,000 or 7,000 feet long for certain types of aircraft. And it is expected that in 1960 the jet aircraft which will then be in service will need runways 9,000 and perhaps even 10,000 feet in length. The length of the runways, unfortunately, is not the only consideration. The load that they are capable

of supporting is also a very important factor. In 1937 few aircraft weighed over 20,000 lbs., whereas today many aircraft weight 120,000 lbs. and even 135,000 lbs.; and the jet aircraft I have just mentioned will probably weigh as much as 285,000 lbs.

Obviously, our responsibilities do not end when we have built runways suitable for the aircraft which are to use them. We must also install at our airports and on our airways the electronic equipment necessary to facilitate the navigation of aircraft in flight and to assure their safety at all times. You may judge the magnitude of this responsibility when I tell you that we have in Canada 18,000 miles of airways, and that 16,000 miles are provided with navigation aids. At the present time most of these airways are equipped with low frequency radio ranges, which guide aircraft along the airways between one airport and another. Though for years these radio ranges were the best equipment available, not very long ago someone invented a more modern radio range giving better service and called the visual omni range, or VOR. VOR operates on a high frequency and, whether he is on the airway or not, the pilot may take a bearing on the station and locate his position anywhere within its range. Moreover, instead of listening continually on earphones to an audible signal, the pilot can see the VOR signal on his instrument panel and verify whether or not he is in fact flying over the route which he wishes to follow.

It was necessary, of course, for us to adopt this new equipment and to undertake its installation. We have completed the installation on the airway between Montreal and Windsor and are in process of installing it on the airway between Toronto and Winnipeg. As the equipment becomes available, we shall continue with the installation on the other segments of the trans-Canada airway. But the point I want to emphasize is that these VOR radio ranges have to be installed about 40 miles apart, and cost, installed, about \$50,000 each; so you see that this single item, the existence of which is unknown to most air travellers, represents a pretty substantial expenditure.

To permit the use of airports at night, we are obliged to provide lighting systems and to facilitate their use in bad weather we have to install instrument landing systems, or ground control approach. These installations are very expensive but, of course, they increase greatly the utility and efficiency of the airport and add an important measure of security.

The movement of aircraft over the airways is directed by what is called air traffic control. The control centre is at all times in communication by radio with the pilot so that the controller may estimate the position of the aircraft from time to time as it flies along the airway. With the increase in the number of aircraft on the airways and in their speed, it has become necessary to know much more precisely the position of aircraft in flight between specific points. You may readily appreciate the difficulty of working only on estimates and the

consequences of a slight error, when I tell you that jet aircraft fly at a speed which may exceed 600 miles per hour, because in the space of a single minute a jet aircraft may travel as much as 10 miles.

Consequently, in order to maintain at a high level the security of air travel, we have undertaken the installation of surveillance radar at 15 of our largest airports. Each of these stations will permit the traffic controller to determine the position of any large aircraft within a radius of 135 miles and up to an altitude of 50,000 feet, and, accordingly, to exercise a much more effective control over the movement of aircraft on the airways. When we have completed the installation at these 15 points across the country, the whole trans-continental airway from one end to the other will lie within the range of these radar stations. It is, of course, obvious that these radar stations will add greatly to security in the air and meet a need which is becoming more urgent, but the total cost will run to about \$8,000,000.

I hope that what I have just told you gives you a good idea of some of the consequences of the development of faster, heavier and more modern aircraft, and also how modern electronic equipment adds to the security of air travel and also to the amount of our expenditures for aviation.

But these are by no means the only problems which developments in aviation have created. Modern aircraft carry a great many more passengers than they did in 1937. It was fairly easy to build a terminal building capable of accommodating the 10 or 12 passengers who might step out of a Lockheed Lodestar, the first type of aircraft which TCA used; but it is not so easy to build a terminal to accommodate in comfort the 40 passengers who may alight from a Viscount, the 60 who may descend from a North Star, or the 70 who may emerge from a Super Constellation which has just landed. You can well imagine, too, how much the situation is aggravated when several of these large aircraft arrive more or less at the same hour, or, worse, still, when several large aircraft are delayed at the same place by weather conditions.

Of course, we have been well aware of how desirable it is to develop more comfortable and more spacious buildings for air travellers but, as we had to begin at the beginning and place first things first, we have not been able to build all of the terminal buildings we would have liked to have. However, we have made some real progress and I do not think that by and large our situation is worse than in other countries where aviation has expanded as rapidly as it has in Canada.

I do not want to give you the impression that little has been accomplished up to the present. My own Department has completed new terminal buildings at Moncton, Seven Islands, the Lakehead, Saskatoon, Comox and Sandspit, and we will soon complete new buildings at Quebec City, Windsor Stephenville and St. John's, Nfld., while municipalities, with some government assistance, have

built new buildings at Calgary, Saint John, N.B., Sudbury, Timmins, Rimouski and at one or two other places. The Department of Transport, in addition, has three very large projects on which construction is progressing, which will involve an aggregate outlay of nearly \$20,000,000, and is developing plans for other terminals which will be built when circumstances make it seem more expedient than it is at the present time.

This, I hope, will give you a good view of what has been taking place in Canada in the field of civil aviation, and enable you to understand some of the difficulties which we have to overcome. Perhaps, too, what I have said will lead you to judge us sympathetically if, for some good reason or other over which we have no control, your departure by air is delayed, and you are obliged to wait with a lot of other people in one of our crowded terminals. I hope that if this misfortune befalls you, you may find some consolation in recalling that we have tried always to place security of air travel ahead of all other considerations. Having done that, we are now taking active steps to provide more in the way of comfort for the travelling public and more agreeable and more commodious terminals for their use.

The Years Ahead

What does the future hold for us in this field of activity? I shall not attempt to play the part of a prophet and I shall only relate to you what we have been told by authoritative sources. By 1960 we shall have jet aircraft in Canada which will be capable of carrying from 100 to 150 passengers at a speed of between 550 and 600 miles an hour, and which will weigh as much as 285,000 lbs. We can easily appreciate how much the arrival of so many passengers at the same time would tax the facilities of our terminal buildings, but at our major airports to be served by aircraft of that type we are providing for traffic of this kind. Speeds of 600 miles an hour will undoubtedly complicate enormously the control of air traffic, particularly when traffic moving at such high speeds must mix with slower moving aircraft, but we believe that the radar stations which I mentioned earlier will enable us to exercise efficient control over all traffic.

For the airlines themselves there will be other problems, because the much higher speeds of jet aircraft will give rise to new and complex problems. It will be possible with jet aircraft to cross the Atlantic and return during the same 24-hour period, and to travel from Montreal to Vancouver in $4\frac{1}{2}$ hours instead of 11 hours and 40 minutes as at present. The volume of work - i.e. the number of passenger-miles - done by the new aircraft will be enormous - so will their cost. It is a fact that 150 of the new aircraft will in a single year be able to carry as many passengers as the 4,500 multi-engine aircraft now in the service of the world's commercial airlines.

In the 10 years which ended on 31 March 1955, the Department of Transport spent for capital purposes more than

\$115,000,000 on its own behalf, and further sums exceeding \$65,000,000 on behalf of the Department of National Defence. Since 31 March 1955, we have made other expenditures which bring the total for this relatively short period to more than \$200,000,000. We believe that we shall have to go on spending large sums to meet the prospective needs of aviation in Canada. Though it is difficult to know just how much is involved, I shall not be surprised if the total runs between \$200,000,000 and \$300,000,000, but I cannot say just how soon we shall spend these amounts because we must take account of economic and other conditions and we must also remember that the aviation picture is constantly changing.

As we undertake the projects that must be carried out at airports all across Canada, I hope that you will understand that these works are a necessary part of the task of maintaining aviation in Canada in the place where it belongs and so it may best serve all of the Canadian people.

S/A