



STATEMENTS AND SPEECHES

INFORMATION DIVISION
DEPARTMENT OF EXTERNAL AFFAIRS
OTTAWA - CANADA

No. 51/40 CANADA'S DEFENCE PRODUCTION PROGRAMME

A statement by the Minister of Defence Production,
Mr. C.D. Howe, made in the House of Commons,
October 19, 1951.

The defence programme on which we have embarked in discharge of our treaty obligations, and our national responsibilities, falls into two main parts: the direct military programme on the one hand and the vitally important resource development programme on the other. An appreciation of Canada's defence efforts can only be obtained by considering both of these important contributions to the objectives of the North Atlantic Treaty. We are not at war; we are not preparing for war. We, in company with our allies, are strengthening our common defences and expanding our resources so that in the event of an emergency we could sustain the great effort we would have to make. The fact that resource development is more palatable to any country than armament production does not in any way detract from its usefulness or its importance towards the common end. It would not be proper for us to concentrate all our efforts on one, or on the other; the two must go hand in hand.

But first let me deal with the direct programme of the Department of National Defence. The amount of cash appropriated by parliament for the Department of National Defence and the Department of Defence Production during the fiscal year 1951-52 is \$1,729 million. National Defence appropriations total \$1,614 million, including \$166 million for mutual aid. The Department of Defence Production appropriations are \$115 million. Of the total of \$1,729 million about \$1,108 million has been made available for construction, production and procurement through the Department of Defence Production. The remaining funds are required for military pay and allowances, maintenance and other services not provided through the Department of Defence Production.

In addition to this cash disbursement authority, parliament has also authorized the entry into commitments which would enable the government to initiate production now in order to complete its \$5 billion programme by 1954.

Orders for defence goods, excluding capital assistance and stockpiling, placed during the first half of this fiscal year amount to a value of \$1,122 million, as compared with some \$760 million for the whole of the previous fiscal year. Placements rose from \$464 million in the first quarter of 1951-52 to \$658 million in the second quarter.

Expenditures for deliveries and progress payments made in the first half on this fiscal year amounted to \$267 million. In addition, outlays for capital assistance were

\$26 million. The rate of disbursement, however, has been increasing rapidly during recent months. Expenditures during the first quarter of the present fiscal year averaged \$25 million per month, but during the second quarter rose to about \$70 million per month. Disbursements will be greatly accelerated over the next twelve months, and may approach an average of \$125 million a month or an annual rate of \$1,500 million. The peak rate of expenditure will probably be reached early in 1953.

Production of defence goods in Canada for export will also increase rapidly during the remainder of the current fiscal year. According to present schedules it may be in the order of \$40 million a quarter by the middle of 1952.

When I spoke in this house on June 14 of this year I reviewed in some detail the status of our major production programmes, including aircraft, electronics, ships, guns, ammunition, and mechanical transport. I now propose to review these programmes again to record our progress since that time.

Aircraft

The Canadian military aircraft programme, as presently planned, will cost approximately \$1,200 million. This amount is equivalent to roughly one-third of the total Canadian defence procurement programme. Several types of aircraft are being manufactured or rebuilt.

Production of the F86E Sabre jet interceptor fighter is already well under way. One hundred and twenty-two of these aircraft have come off the production line, as of the beginning of this week, and 72 of these have been delivered to the R.C.A.F. Future delivery schedules depend primarily upon the rate at which we are able to obtain engines from the United States. This week at the A.V. Roe plant I turned over to the R.C.A.F. its first Canadian-designed and built CF-100 aircraft.

Static tests operation of the Orenda engine was first successfully carried out in March 1949. A pre-production contract for the CF-100 was let in November 1949, for the developing of this aircraft to the point where it could be put into quantity production. The first development aircraft flew in March 1950, fitted with Rolls Royce Avon engines. The completion of the aircraft equipped with Orenda engines now turned over to the R.C.A.F., marks the culmination of a most difficult but successful development programme.

The production programme is just now getting under way, and full scale production is necessarily still many months off. It should be remembered, however, that in producing a plane such as the CF-100 it is not enough to establish a production line in the aircraft plant, although obviously that is no small job. It is also necessary to ensure a satisfactory flow of the great number of complex components that go into such a plane; and to obtain the required parts, A.V. Roe Company has placed a large number of sub-contracts from Winnipeg to Halifax. In many instances, Canadian suppliers of the different parts that will go into the CF-100 and the Orenda must enlarge their facilities or open up new plants in order to meet A.V. Roe's requirements. Typical examples of such expansion include Canadian Steel Improvement Limited in Toronto which will produce steel and

non-ferrous forged blades; Rotax (Canada) Limited at Scarboro turning out fuel systems for the Orenda engines; Cockshutt Flow's new development at Renfrew for the manufacture of combustion chambers; Light Alloys Limited which will make magnesium castings and forgings; the Fleet Manufacturing Company which will produce wings at its Fort Erie plant, and Chatco Steel Products Limited supplying tail assemblies.

Until these components, many of which are being produced in Canada for the first time, are available in sufficient volume, quantity production of the CF-100 is clearly impossible.

The F86E and the CF-100 are two major aircraft projects, but there are other important programmes being undertaken in this field. The Harvard primary trainer will start coming off the production line before the end of this month. At the present time we are purchasing the engines for this plane, but by next summer we expect that Pratt and Whitney of Canada will be producing engines in their new Canadian plant just outside of Montreal.

The Beaver general purpose aircraft, is now being manufactured in Canada in substantial volume for the United States air force.

Tooling up is underway for the manufacture of the T33 jet "Shooting Star" type trainer for the Royal Canadian Air Force, production being scheduled for next year.

In June I advised the house that Canada would participate in the production of the United States twin-engine trainer, the Beechcraft T36A. This is a brand new plane. The prototype has yet to be built and flight-tested. Full scale production is therefore not expected to get under way before 1953.

In addition to these production programmes we are now engaged in the re-conditioning and modification of Lancasters, Harvards, Mitchells, Expeditors, DC-3's and Avengers. This work is being done at Edmonton, Winnipeg, Toronto, and St. John's, Quebec. In addition, aircraft maintenance and repair is being carried out at these cities as well as at Vancouver, Calgary and Halifax.

Shipbuilding Programme

Outlays on the construction of naval vessels and repair and maintenance being undertaken on behalf of the Royal Canadian Navy will result in expenditures of from \$150 to \$200 million between April 1, 1951, and March 31, 1953. In addition contracts are being discussed with Canadian manufacturers for torpedoes to a value of some \$39 million.

In January I mentioned that contracts had been allotted for one icebreaker, 14 minesweepers, 14 escort vessels and 5 gate vessels, as well as a number of harbour craft.

Of the 14 minesweepers on order, 7 are scheduled for launching by late fall 1951 and the remaining 7 by early spring and summer of 1952. Eight ships are scheduled for sea trials during the spring and early summer of 1952 and the remaining 6 for mid-summer and early fall of the same year. Four of

the five gate vessels will be launched before freeze-up and two of them will finish their sea trials by the end of the year. The fifth gate vessel will be launched in the spring of 1952.

The first of the escort vessels is scheduled for launching by the end of next month, two more for launching in the spring of 1952, two in the fall of the same year, five during 1953, and four by the spring of 1954.

The bulk of contracts for scheduled items such as turbine engines, auxiliaries, and other components have been let to manufacturers in this country.

I also mentioned last summer that we were converting and refitting thirty-four minesweepers and frigates. Inspection of these vessels has now been completed and preliminary work is under way. Hull repairs are well advanced on most ships.

Destroyers are also being modernized for anti-submarine work and expenditures are being made for the seaward defence of the principal Canadian harbours.

Guns and Ammunition

The guns and ammunition programme presents particular difficulties. Having taken the decision to standardize on United States type guns and ammunition as far as is practicable, we have had to make a detailed study of the various types of ammunition and weapons in order to determine which we can usefully produce in this country. This involved securing from the United States detailed plans and specifications. It has also been necessary to make arrangements for production experts from this country to visit the various arsenals of the United States in order to survey production methods and techniques. Despite the fact that we have enjoyed the greatest co-operation from the United States military authorities, this has been, of necessity, a time-consuming operation. Nevertheless some considerable progress has been made.

Production is already under way on 50 calibre ammunition and 3.5 inch and 2.25 inch rockets for Canadian armed forces. Deliveries of the 3-inch 50 calibre gun to the United States and Canadian navies will begin in December. By the end of the current fiscal year production will have commenced on the antisubmarine mortars and on practically all the large and medium calibre guns, mortars and ammunition required by our armed forces.

The guns and ammunition programmes are expected to accelerate throughout 1952 to peak production in the fourth quarter of next year.

Two explosive plants, one manufacturing picrite and the other a number of explosives including RDX/TNT and rifle powder, are already in production. TNT, cannon powder and double base powder will be in production in Canada early in 1952. Phosphorous and hexachlorethane are also being made to government specification, the latter principally for export to the United States. The timing of this programme is expected to coincide in the early stages with the requirements of Canadian shell-filling plants.

At the last session we had a very frank discussion concerning the desirability of seeking standardization of small arm weapons and ammunition among the NATO countries. A complete study of this question is now being undertaken by the principal NATO countries, and in the meantime we have no alternative but to suspend production of weapons and ammunition of the smaller calibres.

Mechanical Transport

Last April I released a statement in which I advised that preparations were being made for the partial manufacture and complete assembly of $\frac{1}{4}$ ton, $\frac{3}{4}$ ton and $2\frac{1}{2}$ ton military trucks in Canada. These orders were placed with our three major automobile manufacturers and I am delighted with the progress which they have been able to make in such a short time. Last week I had an opportunity of visiting both the Chrysler Corporation plant in Windsor and the General Motors plant in Oshawa to examine the first trucks which they have produced. Authorization has also been given to the Ford Motor Company to commence production of the $\frac{1}{4}$ ton 4 x 4 jeep, which we hope will be coming out by next December.

At the General Motors plant, a $2\frac{1}{2}$ ton 6 x 6 military truck is now in production and will be coming off the line at the rate of 7 vehicles a day by the end of next month. This vehicle is practically a duplicate of the kind that is being produced for the United States forces. It can be equipped with a snorkel breathing device which enables it to ford water up to five feet in depth. It is bigger and faster than the 6 x 6 vehicle that General Motors built in the last war and much easier to operate. All the vehicles are fitted with towing attachments and controls for operating trailers. It is planned that several thousands of these trailers will be produced in Canada in the near future.

At the Chrysler Corporation in Windsor I had the opportunity of seeing the first of the $\frac{3}{4}$ ton 4 x 4 military trucks coming off their assembly line. In these two plants we have established a source of United States-type vehicles that can be expanded quickly to meet any scale of production required by our armed services.

Naturally we are continuing to place orders with Canadian manufacturers for commercial-type vehicles and for the repair and maintenance of existing equipment.

Electronics Programme

The total Canadian electronics programme as tentatively outlined amounts to \$560 million. Of this \$110 million represents electronic gear to be installed in F86E and CF-100 aircraft. The remainder includes expenditures for receiving and transmission sets and radar equipment for all three services.

Anti-aircraft fire control radars are already under production for the Canadian armed forces. Twenty-four sets have already been delivered. Deliveries of the one-mile infantry pack set are expected to begin by December. There is every possibility that we will receive additional orders for these types of equipment from one or more of our NATO allies.

Canadian plants are now being called upon to produce the bulk of the equipment to be installed in the North American radar screen and to furnish the equipment necessary to complete the network of communications vital to the defence of this continent. Because of the development required in this programme before production can be undertaken, it is unlikely that its full impact will be felt by industry until the last months of 1952.

Defence Construction

Contracts presently being administered or in process of being placed by Defence Construction Limited will amount to \$440 million in the three fiscal years between April 1951 and March 1954. These outlays provide for the erection of radar screen buildings and supporting facilities, airfields, barracks, training facilities and quarters for married personnel. Outlays will probably reach a peak about the middle of next year. Deliveries of scarce building materials, such as structural steel, reinforcing bars, and wire mesh, while presenting a problem in individual cases, are not expected to cause serious delays in the realization of this programme.

Contract awards since the incorporation of Defence Construction Limited late last year have amounted to \$146 million. Fifty-three million dollars' worth of new construction has now been completed.

Machine Tools

Another of our major activities has been in the field of machine tools. The Department of Defence Production has purchased nearly \$17 million worth of tools in the first five months of the present fiscal year. Over \$2½ million worth of these orders have been placed in Canada, approximately \$1½ million in the United Kingdom, and over \$12½ million in the United States and other countries.

These tools, when purchased by the department, are made available to Canadian contractors holding government contracts. Since they are bulk purchased it means not only a saving to the government in purchase price, but it also helps to obviate long delays which would otherwise be inevitable in the various production programmes.

Textiles and Clothing

The 300 million dollar clothing and textiles programme is making rapid progress. Peak production rates of essential primary textiles have already been achieved. By the end of the calendar year the government will have received over 16 million yards of cotton textiles, 4½ million yards of wool fabrics, and over 6 million yards of synthetic textiles. In the case of wool fabrics, this excellent performance was possible only because the government, realizing the urgent need of entering the raw wool market to secure adequate supplies, purchased eight million pounds of raw wool and tops. As a consequence, firms with defence contracts were able to begin production at once on military orders.

Now that primary textiles are coming forward in an increasing flow, the second part of the programme, converting fabrics to garments, can be accelerated. Schedules of production so far outlined call for the delivery by the end of the

calendar year of one million pairs of wool socks, 550,000 wool shirts, 250,000 cotton shirts, 150,000 suits of army battle dress, and 400,000 wool blankets.

The production of military boots and shoes is also proceeding at a high rate. We expect to get from the factories by the end of December 1951, over 300,000 pairs of boots and 140,000 pairs of shoes.

In these few minutes I have been unable to do more than outline some of the major aspects of our direct military production programme. I hope however that I have said enough to convince you, as I am convinced, that we are well on our way to the achievement of the objectives laid down by the government earlier this year.

Development of Strategic Materials

In addition to the production of military end items, Canadian industry is pursuing another programme which I am firmly convinced is of equal importance. I refer to the development of the many strategic materials which are to be found in Canada. None of us know how long this rearmament period may last. But it is obvious that if we are to maintain and expand our own industries, while at the same time making available to our allies strategic materials that are in world wide short supply, we must do everything possible to develop these materials as rapidly as possible.

As the programme is now planned, nearly \$1½ billion will be spent on the development of basic resources of iron ore, non-ferrous metals, petroleum and bulk chemicals for the period 1950-1955. This figure will probably be even higher because of other projects still in the planning stage. In addition, \$1 billion will be spent on the development of hydro-electric power.

In many instances our resources have been left untouched in the past because of the high cost of exploitation. Rising prices and physical shortages are now changing the picture. Due to more favourable cost-price relationships, projects can now be considered feasible that were formerly uneconomic. We all realize the seriousness of inflationary trends in the price structure. Nevertheless we should not overlook the fact that with present prices and the prospect of continuing high levels of demand, it is now possible to bring into production certain important sources of urgently needed supplies that would otherwise remain undeveloped.

Another factor is that businessmen have found that investment in Canadian industrial expansion is a sound proposition. Political stability and good working relationships among government, industry and labour, combine in providing an atmosphere favourable to investors. Whether it comes from Canada, the United States, or farther afield there is, I think, little doubt but that the capital needed to bring Canada's resources into production will be forthcoming.

Furthermore the fiscal measures taken by the Canadian government encourage resources development. Income tax concessions include a three-year tax free period for mining companies after they start commercial operations. Exploration, prospecting and development expenses incurred by oil corporations or by mining companies, are also deductible, until such time as the project starts to operate

on a commercial basis. Generous allowance for depletion is deductible in computing both corporation and personal income taxes. Mining and petroleum enterprises are not subject to deferred depreciation, a measure which was introduced to check inflation and reduce non-essential investment. In addition, the government is prepared to grant accelerated depreciation where it is felt this is necessary to encourage further expansion.

In certain urgent cases capital assistance is granted to speed up development. This has been done in connection with the reactivation of the Emerald tungsten mine in British Columbia and to defray part of the cost of building a railway to a new nickel-copper mine in northern Manitoba. In addition, special priority assistance is given to industries developing other basic resources. Approved projects receive priority treatment in procuring scarce materials such as structural steel, copper wire and other items that are now under an order-approval system of allocation.

Without burdening the house with too many figures and statistics I have tried to give an appreciation of the progress to date of our defence procurement. No programme of this size can be expected to proceed without difficulties. Of course we have our difficulties, but the progress we have made to date is, I believe, such as to justify considerable satisfaction.

Let me remind the house again of the nature of our programme. It is not a programme designed solely to produce great quantities of war material in short order. There is a large element of insurance in it, since we are building now for production levels much in excess of anything that is included in the present planned procurement. For example, our programme includes fourteen destroyer escorts to be produced during a period of three years. We are, however, building a plant for the production of the propulsion machinery that would be capable of producing at more than this rate in a single year. Again in the aircraft programme we are building plants that are capable of doubling or trebling present output of engines and air-frames. In the explosives field, we are rehabilitating the Valleyfield plant of Canadian Arsenals so that it will be capable of producing at least double the currently planned rate of production. Many other examples could be given, but it is clear that a programme such as this is unlikely to appear spectacular in the early stages by any statistical measurement of output.

In his report to the President of the United States on his third quarter of 1951 production, Charles E. Wilson stated that his defence production programme is now emerging from the tooling stage. That is about the position of the Canadian production programme. We are now placing orders at a rate approaching \$200 million per month, and we are making actual cash outlays for procurement at the present time of \$70 to \$80 million per month. Within the next twelve months we will undoubtedly reach a rate of expenditure of between \$100 and \$125 million per month.

I make no apology for the present status of the programme I am satisfied that we are making good progress toward the sensible goals we have set, and I am confident that we will achieve our objectives.

ORDERS PLACED FOR DEFENCE BY THE FEDERAL GOVERNMENT ON CANADIAN ACCOUNT
For the Fiscal Years 1949-50, 1950-51 and First Half of 1951-52

GEOGRAPHICAL DISTRIBUTION OF DEFENCE ORDERS

\$ millions

Country in which orders were placed	1949-50	1950-51	1951-52		
			First Quarter	Second Quarter	Total First Half
Canada	204	623	274	472	746
United States	15	128	188	183	371
United Kingdom	5	8	2	3	5
Total	225	759	464	658	1,122

ORDERS PLACED BY PROGRAMME

\$ millions

Programme	1949-50	1950-51	1951-52		
			First Quarter	Second Quarter	Total First Half
Aircraft	70.6	299.7	167.3	265.9	433.2
Shipbuilding	4.1	76.9	68.4	32.0	100.4
Truck-automotive	12.4	64.6	59.0	19.9	78.9
Weapons	0.7	19.2	19.1	29.5	48.6
Ammunition and explosives	2.4	19.6	16.6	44.0	60.6
Electronics and communication equipment. .	16.6	84.1	21.3	95.0	116.3
Construction and building maintenance	28.7	67.7	49.9	57.5	107.4
Other programmes including: fuels and lubricants, clothing and equipage, medical and dental equipment and supplies, etc.	89.3	127.7	63.0	114.5	117.5
Total	224.8	759.5	464.6	658.3	1,122.9

DEVELOPMENT OF STRATEGICALLY IMPORTANT RESOURCES IN CANADA

Selected Industries

Investment in Development and New Building and Machinery 1950-1955
(Millions of Canadian Dollars)

Industry	Investment		
	1950 (Actual)	1951 (Preliminary)	Value of Expansion Projects Now Being Undertaken for Completion in 1955 or before
Aluminum Smelting	\$ 3.4	\$ 18.2	\$ 233
All other non-ferrous metal smelting, refining and processing . .	19.2	5.0	150
Iron Ore Mining	5.7	23.8	226
Primary Iron and Steel . .	15.7	66.9	88
Petroleum and Natural Gas:			
(a) Exploration and Development(1) . . .	62.4	70.9	300
(b) Transmission and Refining	21.5	37.7	213
Chemical Products(2) . . .	32.8	64.3	127
Total	160.7	286.8	1,337
Hydro-electric Power . . .	344.5	403.8	1,200

(1) Excluding Acquisition of Land Rights

(2) Including Petro-chemical Projects

Selected Minerals
 Estimates of Total Production Capacity 1950-1955
 (Thousands of Short Tons Unless Otherwise Noted)

Material	Actual Output 1950	Estimated Capacity 1950	Estimated Capacity 1955	Percent Increase Capacity 1950-1955
Petroleum (Crude)				210
1000's. bbls/day(1)	80	80	250	45
Primary Aluminum	395	415	603	430
Iron Ore	3,617	3,617	19,000	10
Copper (All forms)	262	272(2)	300	8
Lead (All forms)	170	190(2)	205	27
Zinc (All forms)	311	320(2)	406	13
Nickel (All forms)	123	137	155	...
Tungsten (WO ₃ Content)	0.001	0.001	2	95
Cobalt	0.313	0.313	0.600	0
Magnesium	1.8	5.0	5.0	450
Illmenite	100	100	550	21
Primary Steel Ingot	3,300	3,700	4,400	...
Elemental Sulphur	81	...

(1) Maximum economic rate--annual average

(2) Based on the highest quarterly rate of output during 1950