

Cold War Fighters
Canadian Aircraft Procurement, 1945-54

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Preface

BEFORE I TURN TO the history of Cold War fighters, it is appropriate to present a number of factors that have helped me frame the story and to discuss one or two matters of terminology. As well, there are many people who deserve special thanks.

Being an Air Force officer and one with some practical experience with aircraft procurement in the late 1980s (among other things, I was part of the initial staff processes that ultimately resulted in the sale of Canada's first Chinook helicopters to the Dutch), I was intrigued by the prospect of exploring how Canada had gone about defining and filling aircraft requirements in the early days of the Cold War. My research for a graduate course paper that looked at the military aviation sector up to 1945 had suggested that Canada had not been particularly effective in terms of strategic planning, in either establishing an aviation industrial base or defining a coherent defence strategy leading to the acquisition of specific aircraft types. What, then, occurred in the decade after the Second World War to enable Canada to surge ahead, for a while at least, in a range of aircraft types, from fighters to Short Takeoff and Landing aircraft? What role had government played, the Air Force, industry, our allies?

My review of the literature turned up little that touched on the decisions and actions that converted the policies into flying units, or about the roles the Royal Canadian Air Force (RCAF) needed to undertake, with what aircraft, and in what numbers. And there was little that described the individuals who had made these decisions.

With these questions in mind, I set out to examine the primary sources of the government, the Air Force, and industry. Although a number of different paths could have provided answers to these questions, I was drawn for a variety of reasons to the issues surrounding the procurement of fighter aircraft in the decade between 1945 and 1954. For one thing, this period predated the still-volatile story of the Avro Arrow; by looking at fighter aircraft and the activities of the A.V. Roe company, I hoped I might be able to shed some light on government and RCAF thinking behind the genesis of the Arrow and on the ability of Avro (as A.V. Roe Canada is more commonly known) to produce such an advanced design.¹

Ultimately, this book is a case study that examines the decisions that led to the procurement and introduction into service of two fighter aircraft that still hold much attention in Canadian aviation history. From the evidence, we begin to understand the complexity of the procurement cycle and how decision makers across government, the military, and industry are often forced to work with incomplete information and conflicting priorities.

In order to delimit the breadth of discussion for a book of this size, it was necessary to look at only a very select part of the RCAF's postwar requirements in both time and function. Availability of material, as described below, also forced some decisions about what to look at and how to analyze the material. In the years between 1945 and 1968, the RCAF raised requirements and bought aircraft not just to equip fighter squadrons, in both Canada and Europe, but also to train Canadian and NATO aviators, to conduct anti-submarine patrols over the Atlantic, and to transport materiel and personnel anywhere in the world. Canadian builders produced aircraft ranging from the F-86 and the maritime patrol Argus to the ill-fated Arrow and the diminutive but extremely successful Chipmunks and Beavers, for both Canadian and allied air forces and armies. To conduct an adequate study of the full range of aircraft needs and production, even if limited to those types built specifically for the RCAF, would have been a task of substantial proportions.

Thus, though more work still needs to be done, be it for a fourth volume of the official history of the RCAF or other publication, what follows in this book has been restricted in time and function to looking at Canadian fighter requirements in the decade following the end of the Second World War. From the perspectives of both the Air Force and the aircraft industry, this was a busy and complex period. The RCAF had no sooner demobilized than it began to plan and re-equip to face a new and unparalleled threat. An industry that had been given to seeking any work possible to keep its doors open was soon building aircraft as good as or better than its American and British counterparts. This postwar phase reached its denouement in 1954 with the completion of the build-up of NATO's Integrated Force and at about the same time as the realization that the threat did not warrant the resources being expended either by Canada or its NATO partners. This story, therefore, ends in the summer of 1954.

Readers may have noticed by this point that I have used both "air force" and "Air Force." In this book, I employ the former as a common noun, whereas I use the latter interchangeably with Royal Canadian Air Force and RCAF. Similarly, the two forms "service" and "Service" are common and proper nouns referring to air force and Air Force matters, respectively. I also use the term "Air Staff" to refer to those senior officers and their subordinates who worked the problems within Air Force Headquarters in Ottawa. I would like to define two

other terms: “force structure” and “formation.” This is a story about how the RCAF “structured” itself – in other words, a story about the roles and missions it organized itself to accomplish, and with what equipment and units. As a result, much of the discussion of organizational plans centres on the concept of the structure of the force. Also, although I have just used the term “units,” Air Force leaders and staff would have frequently thought in terms of “formations” – these being groups of units. Thus, the four wings (each consisting of three squadrons) deployed to Europe as part of 1 Air Division would have been formations (as would the Air Division) in an organizational or force structure context. To be sure, “formation” in air force parlance also refers to a group of aircraft flying together on some particular mission, but that sense of the word is not used in these pages.

Finally, although technology is at the centre of this story, this is not a story uniquely about technology but about how the Air Force defined its needs for that technology and how industry responded to those needs. Thus, though some technical aspects of the aircraft and engines will be included where essential to the narrative, I have done my best to render the meanings of “rates of climb,” “Unit Establishment,” “Mach numbers,” and other air force terminology as clear as possible. And for the pilots who pick up this volume, there are some airplane pictures.

The abundance of apparently unexamined material available in government archives coupled with the relative paucity of industry documents also helped steer this study. In particular, material, or rather the lack of it, from Avro (long defunct), Canadair, and de Havilland Canada, the latter declining access to its archives, precluded a detailed exploration of the companies’ strategies. In this respect, one must be satisfied with secondary sources, which, with few exceptions, lack any analysis of the firms’ decisions. The secondary and primary materials that were used in the writing of this book are listed in the Bibliography.

Chapter 1 provides two distinct historical contexts. First, it looks at Canada’s aspirations in the immediate postwar years, as well as Ottawa’s preoccupations in the interrelated domains of foreign policy, economic policy, and security and defence policy. A second discussion touches on Canada’s experience with designing and building aircraft for both civil and military needs before 1945 and examines briefly the unique national conception of air power that had framed Canadian thinking from 1919 to 1939. The remaining chapters tell the story of Air Force actions to shape postwar procurement and force structure from 1943 onward. The discussion flows chronologically for the most part, although, in deference to the realities of government policy, defence procurement, and aircraft manufacture, I deal with certain issues in their entirety and then return to the original time period to continue looking at contemporary matters. As

mentioned, this is a short story that ends in the months leading up to the 1954 target for positioning credible NATO forces in Europe.

The process of producing a book that hopes to make a worthy contribution to the story of Canadian aviation has been a long one, and there are many people who have contributed along the way. I would like to thank not just those who have helped me with this project but also those who have made the War Studies graduate program at the Royal Military College of Canada, which I entered in 1993, possible for hundreds of members of the Canadian Forces as well as a growing number of civilian students. My first appreciation must go to Dr. Ron Haycock, Dean of Arts at RMC and for years the doyen of the program. Without his persistence, this valuable educational opportunity would, I am convinced, not be available with the same breadth or richness that it has. I must also thank those who guided me during my research. Dr. Barry Gough, Dr. Jack English, and Dr. Al English all challenged me to seek newer levels of appreciation and to express my views with ever-greater precision. I am very much indebted for the guidance and patience of Dr. Mike Hennessy, who endured my errant attempts and patiently refocused me when I wandered off course. Most importantly, he showed me that history is much like detective work, where one needs to establish not just the facts but also motive.

A number of other people helped me directly with my research. Dr. Steve Harris and Dr. Carl Christie of the Directorate of History and Heritage (formerly the Directorate of History) at National Defence Headquarters in Ottawa were great supporters and gave me some important leads. Dr. Harris was also present at the birth of the project, opining that someone with a background in aircraft procurement might surely want to take a crack at telling part of the story. Dr. Isabel Campbell, also of DHH, was unreserved in helping me find the best, and often uncatalogued, material to help make this story as complete as possible. The staff of Library and Archives Canada were always professional, patient, and friendly. I must also acknowledge the assistance of Ms. Cathy Murphy and the Information Resource Centre at the Canadian Forces College – the big room with all the books – not just with this project but with many endeavours over the years. Dr. Tom Dececchi, Academic Director at the Canadian Forces College while I completed the original research, offered encouragement in the workplace, particularly when the day job could easily have absorbed all my time and energy.

Recent help has come from Dr. Dean Oliver, Director, Research and Exhibitions at the Canadian War Museum, whose institution partners with UBC Press in this very important military series. The value of the works published by UBC Press under the editorship of Emily Andrew is hard to overstate. Under

her direction, military history spans many disciplines and interpretations, showing that the field is about much more than great men and great battles. Last and certainly not least, I wish to thank Megan Brand and her editorial team for helping transform the manuscript into the book in your hands.

All of these people have helped me gain new insights into the story that this book presents. I can only hope that my interpretation does credit to their support and to the events.

Finally, and most importantly, I must thank my wife, Norma, and my children, Christian, Karen, and Kevin. There is little doubt in my mind that without their understanding and support, without the countless hours when they amused themselves on so-called family holidays, this work would have remained unfinished. I dedicate this volume to them, with all my love.

Abbreviations and Acronyms

AAFCE	Allied Air Forces in Central Europe
A/C	Air Commodore
A/C/M	Air Chief Marshal
AFHQ	Royal Canadian Air Force Headquarters
A/M	Air Marshal
AMAE	Air Member for Aeronautical Engineering
AMAP	Air Member for Air Plans
AMAS	Air Member for Air Staff
AMOT	Air Member for Operations and Training
AMP	Air Member for Personnel
AMRD	Air Member for Research and Development
AMSO	Air Member for Supply and Organization
AMTS	Air Member for Technical Services
AOC	Air Officer Commanding (the commander of a group of units, e.g., AOC Western Air Command)
A/V/M	Air Vice-Marshal
CAS	Chief of the Air Staff
CDC	Cabinet Defence Committee (replaced the Cabinet War Committee in the fall of 1945)
CEPE	Central Experimental and Proving Establishment
CGS	Chief of the General Staff (Army)
CNS	Chief of the Naval Staff
CSC	Chiefs of Staff Committee
CWC	Cabinet War Committee
D/AMAP/O	Deputy Air Member for Air Plans (Organization)
D/AMAP/P	Deputy Air Member for Air Plans (Plans)
DAO	Director of Air Operations
DDP	Department of Defence Production
DEA	Department of External Affairs

DM	Deputy Minister
DMS	Department of Munitions and Supply
DOR	Director of Operational Requirements
DPR	Director of Public Relations
G/C	Group Captain
GFP	Government Furnished Property (components of limited quantity for which distribution is controlled by an oversight organization in order to ensure maximum efficiency)
IDB	Industrial Defence Board
MCC	Military Cooperation Committee (planning component of the PJBD)
MDAA	Mutual Defense Assistance Act
MND	Minister of National Defence
MND(A)	Minister of National Defence for Air (created during the Second World War and maintained until early 1946)
NATO	North Atlantic Treaty Organization
PJBD	Permanent Joint Board on Defence (cooperative board formed between Canada and the US during the Second World War and continued after the war)
PM	Prime Minister
RAF	Royal Air Force
RNAS	Royal Naval Air Service
SCS	Screening and Costing Staff of NATO
S/L	Squadron Leader
SSEA	Secretary of State for External Affairs
TCC	Temporary Council Committee (NATO force structure review organization)
UE	Unit establishment (the number of aircraft allocated to a flying squadron)
UNO	United Nations Organization
VCAS	Vice Chief of the Air Staff
W/C	Wing Commander

1

An Air-Minded Middle Power

THE YEAR 1950 WAS a monumental one for the Royal Canadian Air Force (RCAF) and for the Canadian aircraft industry. Forty-one years after the flight of the Silver Dart, Canadian aircraft were again on the world stage.¹ In January, the Canadian-designed and manufactured Avro CF-100 all-weather interceptor took off on its maiden flight from Malton, Ontario, and just eight months later Montreal's Canadair Limited produced the first of thousands of Canadian-manufactured F-86 day fighters. Both aircraft were unquestionably state-of-the-art machines in 1950, and Canadians – in the Air Force, in government, and in industry – were justifiably proud of the nation's achievements.

Indeed, at a time when both the United States and the United Kingdom, Canada's senior partners in aircraft production during the Second World War, were working on designs that were not as capable as the CF-100, it seemed clear that Canada had made significant strides in the capability and quality of its aerospace industry. By harsh comparison, although sixteen thousand aircraft had been turned out in Canada during the war, not one engine had been built in the Dominion; Canada had been a manufacturer of airframes but an assembler of aircraft.² Even there Canada lagged behind, for not one of the aircraft produced was of Canadian design; every type built in Canadian factories was of American or British origin.

What had changed in just five short years? How had Canada come to have the impetus and the resources to produce, and in one case design, not one but two world-class jet fighters, not to mention a wide range of other military aircraft? As we shall see, at the end of 1945 there had been only the most remote possibility that Canada would ever have an Air Force equipped with such highly capable machines. Yet by the time these two flights occurred, plans were in place for an air arm that would make the formidable wartime Air Force seem unremarkable.

The context within which the RCAF was reconstituted is not new to the student of Canadian history who is familiar with both the postwar demobilization of Canada's armed services and the equally rapid build-up that occurred beginning at the end of the 1940s in the face of the Communist threat. What

is less well known is the association between Canada's air requirements and the explosive growth of the nation's air industry. Indeed, Canadians tend to see the Avro Arrow as Canada's major initiative in the field of military aircraft, but this venture was possible only as a result of the work that had begun in the latter part of the war and continued, initially with little fanfare, through the second half of the 1940s. This book examines the parallel developments of Canada's fighter aircraft requirements and its industry's attempts to satisfy those needs while integrating two other critical aspects of the nation's journey in the postwar world: statecraft and finances. The interconnections between all of these issues – security and defence, economy and industry, international affairs and politics – are not new, but this book examines them from the perspective of the Air Force leaders who both advised government and dealt with business while preparing their Service for the possibilities of either a cold or a very hot war.

To set the stage properly, this chapter is divided into three parts. The first examines the central issues of foreign affairs, economy, and defence that confronted Ottawa immediately after the war. The second briefly discusses Canada's air power experience, including questions of manufacturing and defence requirements up to 1945. In the third part, I will lay out the hypothesis with which my investigation began.

Three interconnected themes captured the attention of Canada's leaders as the prospect of an allied victory emerged in 1943. First, the nation and the world would need to look again at an international association that would effectively promote goodwill between member states and permit the peaceful resolution of conflict. This in turn would allow for the re-establishment of economic prosperity. Spending on security might contribute to peace but certainly not to prosperity and might not be all that necessary if the nations could ensure a peace dividend. Whatever the calculus of interaction, however, decisions on these issues would have to wait for the end of hostilities.

For Canada, these questions came with both old baggage and hopes for a clean start. The baggage was Canada's colonial past; only recently had the nation broken completely free from mother Britain. The independence won with the signing of the Statute of Westminster in 1931 had been exercised with some difficulty in the years since, although there had been a number of clear demonstrations of that independence. In the years leading up to 1939, the Canadian government had been adamant about making its own defence policy decisions. Possibly the most prominent of these had been Canada's own declaration of war against Germany on 10 September 1939, a full week after Britain had entered the conflict.

Canada had gone on to be a full and significant partner in the conduct of the war, contributing far more than the country's population, economy, and wealth might have suggested. By the end of the conflict, and even during the fighting, Canadians, particularly statesmen and bureaucrats, had come to see the nation as a "middle power." But what was a middle power? Ottawa viewed it as a nation that merited consultation in areas of relative strength, but this Canadian self-definition was not necessarily recognized or respected by the superpowers.³ Certainly, Canada's status during the war had been one of a partner but a very junior one who was not always asked to the important meetings.⁴

Nonetheless, Canadian leaders were well aware that they had been present at the birth of the Pax Americana and, as close neighbours and relatives, wanted to play a role in that paradigm. Although the nation was not a big power, politicians in Ottawa wanted to benefit from Canada's comparative strength at the end of the war and did not "intend to become mere pawns" in international affairs. Figuring out what Canada could do was the challenge.⁵ The answer appeared to lie in part in the intersection between Canada's political and economic aims for the postwar world and the heightening tensions between the US and the Soviet Union. Rather than be followers, as had been the case before and during the war, Canadian leaders were determined to get out in front of the issues and use what influence they had to shape the solutions. They recognized clearly that the power base in the Atlantic had shifted to the United States and that, as its nearest neighbour, Canada would always be affected by American decisions. At the same time, they understood that only the US could counter the spread of Communism should it become a serious threat, as appeared to be the case. If Canada could influence US decision making in the direction of international alliances that were good for both security and economic prosperity, it would have achieved about the best that it could, and a not insignificant achievement at that.⁶

This approach was a significant departure from the isolationism of the Mackenzie King governments of the 1920s and 1930s. By 1945, King's hold on power was starting to slip, and although he remained Prime Minister and Liberal Party leader until 1948, younger, more internationalist ministers were starting to shift the focus. Louis St-Laurent, who replaced King first as Minister of External Affairs and then as Prime Minister, and his colleagues were firmly committed to an engaged outlook. And whereas King had had little trust in his Cabinet, St-Laurent took the completely opposite approach, giving Lester Pearson, who replaced him at External Affairs, Brooke Claxton at National Defence, and C.D. Howe, with his various economic portfolios, his confidence and the freedom to operate their ministries as they saw best.⁷

This new vision was placed before the Canadian people in early 1947. Presenting the Gray Lecture at the University of Toronto in January, St-Laurent tied the threads together:

We are aware ... that economic revival is a matter of great importance to us. We are dependent on markets abroad for the large quantities of staple products we produce and cannot consume, and we are dependent on supplies from abroad of commodities which are essential to our well being. It seems to me axiomatic, therefore, that we should give our support to every international organization which contributes to the economic and political stability of the world.⁸

St-Laurent's speech set the framework for Canada's foreign posture (and by extension, security and defence policies) for the next decade.⁹ Although there were obvious links between the three issues, St-Laurent was Minister of External Affairs and so it is to international matters that we turn first.

The Department of External Affairs (DEA) had begun consultations on post-war issues with Canada's allies in 1943. The department's Post-Hostilities Planning Committee focused its efforts not only on international cooperation and organizations but also on Canadian representation. Thus, in discussions with allies, diplomats firmly opposed the notion of regional associations where there would be a risk of Canada's being represented by the Commonwealth or by Britain. King, for all his isolationist tendencies, still wanted Canada to have an independent voice when there was occasion to participate internationally.¹⁰

By the end of the year, Canadian leaders had established three principles that they deemed to be of fundamental importance in setting up any postwar international structure. First was the need for a system of collective security to protect international society. In Canada's view, collective, or common, security was not a series of regional arrangements where only those nations in a region affected by a crisis might be expected to resolve it. Unlike Britain, Canada wanted a true world body. Second, Canada held that the decisions of any such international body should not be made only by the great powers, but that all member states should have some voice. As King would say, "we cannot accept the idea that our destinies can be entrusted to the four larger powers." The third principle was the "functional idea" – in essence, having lesser nations join in the decision making where their own expertise in the matter in question was significant. This was hotly contested and eventually dismissed by Britain and the US – to allow Canada to join in any decision making would set a precedent for other nations. Although Canada might well have legitimate expertise in many areas, this was not to be considered a rationale for giving the Dominion any decision-making authority.¹¹

These discussions were taking place during a trying political period in Canada – the question of conscription for overseas service was being hotly debated nationwide, and the government was keenly aware of the importance of national unity. Views about whether Canada should contribute to a collective Commonwealth foreign policy or have its own voice were about evenly split nationally. In Quebec, however, 70 percent of the population favoured an independent Canadian policy, compared with 21 percent who would accept a Commonwealth approach. For a government that had just weathered the rigours of the war and the Conscription Crisis of 1944, there was little doubt that a policy that was largely acceptable to Quebec was the preferred option.¹²

There was also a bilateral aspect to Canada's insistence on independence on the world stage, for although the US treated Canada as a more or less equal economic and industrial partner, the same was not true in matters of foreign and defence policies or military decisions. And so Canada was fundamentally supportive of a new world organization that, at least in theory, would advantage it in its dealings with the US. The United Nations structure would allow Canada a degree of independence that some American interests would not otherwise favour. The UN link "might help to balance a hemispheric connection that had raced ahead in the realms of economics and military planning."¹³

Part of the counterargument to Canada's desire for functional recognition had to do with the overriding requirement to keep the Soviet Union engaged in discussion: to do this meant not challenging the privileged positions of the great powers.¹⁴ It had been apparent to DEA personnel well versed with the Soviets that problems could arise, but both Canadian and allied leaders were unprepared for the revelations resulting from the defection of an Ottawa-based Soviet embassy staffer, Igor Gouzenko, which exposed espionage activities throughout government offices in Canada, the US, and Britain. These revelations and the associated tension would ultimately lead Churchill to make his 1946 declaration on the existence of an Iron Curtain.¹⁵

It is important to remember that Churchill made his pronouncement in the United States. It was clear to Britain and to Canada that keeping the US engaged in international dialogue was every bit as important as keeping the Soviets talking. After the war, Canada was keen to have the US actively involved in the transatlantic process as a means of ensuring and preserving at least European regional security. Above all, Canada did not want the US to revert to isolationism. At the same time, however, it did not want to be the junior – or worse, silent – partner in either a partnership between Britain and the US or between Europe and North America. Canadian officials and politicians were even prepared to promote a union that went beyond military and economic cooperation towards a North Atlantic political union.¹⁶ The union could be seen from another

angle, too. It would enable Canada to be a partner with the United States, its large and potentially overwhelming neighbour and ally.¹⁷

The notion of a commonality of purpose, with the New World making secure the Old – a concept that would come to be called “Atlanticism” – had originated in the collaboration between the US and Britain during the war. Its postwar manifestation would eventually be the North Atlantic Treaty Organization (NATO). Although the great powers would be given credit for the concept, Canada, too, had long seen the usefulness of a transatlantic linkage on a variety of political, economic, and cultural planes.¹⁸ Two new US programs would demonstrate that the Americans had not abandoned the principle and practice of collaboration but rather were prepared to extend and broaden it.

On 12 March 1947, President Harry Truman introduced a new bill calling for economic and military aid. These measures, comprising the Truman Doctrine, would “support free people who are resisting attempted subjugation by armed minorities or outside pressures.” The bill was in part a response to Britain’s inability to assist the Greek government in its fight against Communist factions, due, ironically, to an earlier US decision to cut financial support to Britain.¹⁹ Only weeks later, George Marshall, Truman’s Secretary of State, announced the European Economic Recovery Program, which soon became known as the Marshall Plan. (The Marshall Plan had several names, including the “European Recovery Program” and the “European Cooperation Act” or “European Cooperation Administration Act.”) Intriguingly, Canada quickly sought to access funds through the plan, not because the Dominion was at risk of Communist influences but because it agreed with the notion of stemming the spread of Communism through economic stability and because it was itself under considerable stress from balance-of-payments disparities.²⁰

St-Laurent and his colleagues applauded the commitments of Truman and Marshall to international stability, but the soon-to-be Prime Minister would say, “there is little point in a country of our stature recommending international action, if those who must carry the major burden of whatever action is taken are not in sympathy.” And though there remained concerns about developments outside Canada’s borders, there were also many issues of nationhood to be settled at home. Matters such as the entry of Newfoundland into the Dominion, the creation of a fully independent Canadian citizenship, the adoption of a Canadian flag, and a federal election all contributed to the complex political terrain.²¹

Not to be dismissed was the economy, in terms of both domestic prosperity and Canada’s trade balances in the North Atlantic markets. Like the US, Canada had come out of the war prosperous, whereas Europe and much of the rest of

the world had been beggared both physically and economically. Ottawa realized the need to rebuild its traditional trading networks and made loans to Britain totalling \$1.25 billion and grants to European nations of approximately \$1 billion. Together these added up to close to 20 percent of Canadian gross domestic product (GDP). This was not economic altruism but a way to sell Canadian products and resources abroad in order to keep Canada's economy healthy.²²

Although there was an economic bottom line, Canada agreed with the US and Britain that long-term security and the related success of the United Nations would be best served by the rapid re-establishment of a worldwide capitalist economy. In August 1945, President Truman advanced the concept of an "open door" for trade in both goods and capital. Truman said that "a durable peace cannot be built on an economic foundation of exclusive blocks, discriminatory policies, prohibitive barriers, autarchy, and economic warfare."²³ Canada's foreign economic strategy was enunciated in the 1945 White Paper on Employment and Income: "International security and freedom from threat of war are the first objects of collaboration and are essential prerequisites of international prosperity."²⁴ The two philosophies displayed considerable concordance.

Speaking in the House of Commons in April 1947, Minister of Finance Douglas Abbott described a situation that appeared enviable in all respects. Canada had almost full employment, demand exceeded supply, and, thanks to the loan and grants made to European nations that continued to rebuild, Canada was again trading with its traditional partners. The loans were of course, temporary expedients but did ensure the trade. The problem, if there was one, was that although currency was flowing in from Europe, it was flowing out to the US, whose industries had the capacity to satisfy growing Canadian consumer desires, particularly when Canadian firms were selling so much of their products to Europe. What Abbott said privately was that the situation with regard to the balance of trade and payments with the US gave him significant concern.²⁵

Of particular worry to the government was the loan of \$1.25 billion to Britain, without which that country would not be able to finance purchases of Canadian goods. The actual terms of the loan included the writing off of war debts from both nations as well as the actual transfer of money to Britain. It had been agreed that the funds would be made available not in one lump sum but over a three-year period. Abbott explained his concerns to Canadian newspaper mogul Grant Dexter: "This was essential and was agreed to because we must find US dollars in substantial amounts to buy materials which enter into our exports to the United Kingdom."²⁶ Canada could simply have spent the money in Canada and gotten the economy going quite nicely, but the whole point of the loan was to

reinvigorate the world economy, and both sides of the House of Commons had agreed with that logic.²⁷

The economic problem boiled down to a significant deficit with the US. This was not a new phenomenon and had in the past been offset by a surplus in exports to Britain and the rest of Europe. Now, however, there was no surplus from overseas trading; the only trading going on was bankrolled with Canadian loans and grants, which actually made the imbalance greater.²⁸ When Britain bought Canadian products, it did so in sterling, which it could no longer allow to be converted into dollars. As a result, in 1946 Canada had a \$500 million surplus with Britain and at the same time a parallel deficit with the US, from which Canadians were buying a range of consumer goods. To make matters worse, Britain and other European nations were reluctant to buy anything from Canada with any funds other than those loaned by Canada. By the fall of 1947, Canada held reserves of just US\$460 million, prompting the government to place an embarrassing tariff on US imports. Only in 1948, after considerable lobbying by Ottawa, did the US Congress finally allow Canada to qualify as a venue in which to spend Marshall Plan dollars.²⁹

Indeed, one of the potential correctives for the trade imbalance would involve the United States buying more from Canada. Through the spring of 1947, the Canadian government applied what leverage it could. The Canadian ambassador to Washington, Hume Wrong, recommended, without much hope, that the US purchase Canadian foods for its relief programs, strategic materials for stock-piling, and finally Canadian military goods for use by US forces overseas. The root of Canadian discouragement was the realization that although the Truman administration understood that only the US could resolve the problem, it was Congress that controlled the purse, and the members of that body were not prepared to spend in an internationalist fashion.

What might save the day was the Marshall Plan. Presenting the idea in a speech at Harvard University on 5 June 1947, the general-turned-statesman called on European nations to put their needs on the table so that the US could provide coordinated assistance. The problem with the grand scheme, from a Canadian perspective, was that it seemed likely that only US goods would qualify for purchase, since, after all, it would be US dollars that the Europeans received. Until that large detail was worked out, the Marshall Plan appeared good only in principle. Indeed, by the closing days of the year, and despite much negotiation, Canada had not secured any special status vis-à-vis the plan.

To shore up the exchange rate, it was now necessary for Canada to secure a standby credit line of \$300 million from the Export-Import Bank, investigate options for \$200 million in loans from the New York money markets, and put

in place a number of trade restrictions. These did not sit well with Ottawa or Washington, but at least they stopped the immediate crisis and enabled Canada to continue trading effectively with its major trade partner.³⁰

Throughout the fall, as American officials drew up the detailed Marshall document, they wrestled with the concept of foreign purchase using US dollars. They were not blind to Canada's specific issues and to the formal and informal collaboration in economy, security, and defence between the two neighbours that had been growing since the 1930s. In the end, Marshall's presentation to Congress recommended buying from foreign markets when the needed commodities were not readily available in the US; the real benefit, it was noted, was that such purchases would strengthen the supplier's economy, which would then have an overall positive effect on the world economy. By the time the formal proposal moved forward, the US was actually facing a shortage of wheat, petroleum, and fertilizer, so these commodities were identified as being suitable for foreign supply.³¹

Much as Lend-Lease had stabilized matters in 1941, this postwar infusion of American funds would help again. Indeed, with the limitation on foreign sources removed, and once British wheat contracts were factored in, Canada garnered some 22 percent of all Marshall Plan expenditures and continued to benefit. Before the Marshall Plan had run its course, Canada turned out, unintentionally, to be arguably among its greatest beneficiaries.³²

Before leaving the question of economic circumstances, we should briefly mention their linkage with defence procurement. It became increasingly evident, as had been the case during the war, that the health of the economy and defence procurement could not be considered in isolation from each other. The Ogdensburg Declaration of 18 August 1940 led to the establishment of a Permanent Joint Board on Defence (PJBD), which was mandated to coordinate the defence of the North American continent, including questions of personnel and materiel. The PJBD agreement was followed by the Hyde Park Agreement of 20 April 1941, which was intended, among other things, to address the imbalance in defence spending. It was noted at the time that although Canada was spending extensively in the US, there were no offsetting US purchases of Canadian materiel. One of the key concepts of Hyde Park was that each nation should concentrate production efforts on what it could build best, with the subsequent coordinated exchange of products as military needs demanded. The modalities of Hyde Park were continued after the war and reaffirmed with the establishment of the Joint Industrial Mobilization Planning Committee on 9 April 1949, which provided a link between the US National Security Resources Board (NSRB) and Munitions Board and the Canadian Industrial Defence

Board, which was set up in April 1948.³³ Before that, the Joint Statement Regarding Defence Cooperation, signed on 12 February 1947, called for such practices as “common design and standards in arms, equipment, organization, methods of training and new developments.”³⁴ The renewal of the main agreement was followed in October 1950 with a Statement of Principles for Economic Cooperation that highlighted the need for coordinated defence production, including “a coordinated program of requirements, production and procurement ... [and] the removal of barriers that impeded the bilateral flow of goods essential for the common defence effort.”³⁵

From an economic perspective, this was good news for Ottawa and did much to address frustrations resulting from closed doors in Washington. As with the larger case of European rebuilding and US balance of payments, Canada wanted to be able to sell military goods to the US or at least have the Europeans buy Canadian goods with their Marshall Plan dollars. It was simply a matter of economic stability, which, by 1949, was apparently recognized by US officials:

As for US military procurement in Canada, which amounted to something on the order of \$1.25 billion during World War II, there is practically none at present in the sense of manufactured products. Raw materials are of course being imported in volume, but Canada wishes to be able to maintain its industrial war potential at a fair level as well as to balance off the US dollar purchases it contemplates making here by equivalent US purchase there.³⁶

If defence procurement could be structured in the same fashion as the Marshall Plan, there would be an opportunity for Canada to buy and sell to the US, to have European nations buy Canadian goods with US dollars, and to work towards common equipment, structures, and doctrine, all of which were much desired by military planners. Canadian politicians and bureaucrats continued to press the matter, reminding US officials that Hyde Park had provided an opportunity for each nation to produce what it was best able to build and to sell it to the other. Nothing more was asked now, but to achieve this level playing field, the Buy American Act of 1933 would somehow have to be circumvented. In April 1950, a solution was found in a previously unused clause of the act that permitted exemptions should buying in the US be “inconsistent with public interest.” Some \$15-25 million could now be spent in Canada, and with the outbreak of the Korean War just weeks later, a foot was firmly in the door.³⁷

The realpolitik of these industrial circumstances, like those encountered in the building of international organizations and the brokering of economic well-being, was evident. The end sought was a stable, prosperous world. The ways

and means included not just international governance and healthy international commerce but also a coherent security philosophy and the associated defence capabilities. In this regard, there were two predominant scenarios based on which defence planners were obliged to produce force structure needs for the immediate postwar period. The first scenario saw a great-power-dominated collective commonwealth in which any nation or nations that did not meet the expectations of the collective would be dealt with promptly, but not necessarily with violence. Complementing this collaborative setting would be a number of mutually beneficial social programs. Taken together, these policies and programs would lead to a safe and prosperous community of nations. The alternative scenario was one of conflict, where the spirit of the United Nations would not be respected and where nations would soon return to the use of war and violence to achieve their ends.

For a defence planner, the two had little in common; indeed, there were considerable differences in the sorts of forces that a nation would require if it followed one path or the other. In the first case, a capable constabulary might suffice. In the second, a robust military would be needed both to defend national sovereignty and for possible overseas actions. The need for overseas action would be dictated by the nature of the threat and the identity of the threatening nation, as well as by a government's desire to become engaged; the latter factor brought to bear all the issues of national unity that were so unique to Canada. This was the theory and those appeared to be the options, but the defence budget for 1946 was in no way tied to the funding of military structures, or to a recognition of the strategic situation, or even to the two scenarios. Rather, the budget was based on the premise that it was too soon to know where the world's security was headed and on the government's overriding emphasis on finances and the economy.³⁸

Intriguingly, when pressed to define the purpose of the military during the parliamentary debate over the 1946-47 estimates, Douglas Abbott, who by 1947 would find himself in charge of the finance portfolio, stated that "Canada's post-war defence forces are designed to provide, first, a representative group of all arms of the services. We need them now as a permanent professional trained army. In addition they are to provide a force to train a civilian army ... which has been the basis of Canada's fighting force in two wars and would be the basis of any war we fight in the future, assuming we fight the war with an army which I take it we would." When questioned further, Abbott admitted that this small professional force was a cadre for possible expansion should that become necessary.³⁹ One might conclude from this that the government was prepared to fight the last two wars and not the one that was coming quickly to the fore.

Canada was slow to move into formal defence relationships with the United States because of King's posture on defence generally but also because, as we have seen, Ottawa did not want to enter into an unequal arrangement. Although discussions about defence plans and cooperation did occur, a regional multi-member arrangement, philosophically not unlike the United Nations, was perceived as much less threatening to Canada's sovereignty. Moreover, Canada was initially more interested in economic than in defence partnerships with the US. Changes to defence relationships came on the heels of a change in US defence spending in 1947. The opportunity to make money and balance the foreign exchange ledgers through defence was not lost on Ottawa.⁴⁰ International voice, economic stability, and security and defence – the three arms of the triangle came together well.

On the heels of the Gouzenko revelations, circumstances in Europe and elsewhere pointed to a creeping Soviet domination and influence that had been recognized by Churchill in 1946. The need for a counterbalance was apparent, and though the Truman Doctrine provided a philosophical riposte, across the Atlantic five nations allied themselves in March 1948 through the Treaty of Brussels. The United Kingdom, France, and the three Low Countries – Belgium, the Netherlands, and Luxembourg – agreed to a defensive strategy and at the same time to closer political, economic, and cultural ties to push back any Communist infiltration.

Additional talks followed almost immediately. These were tripartite discussions between the UK, the US, and Canada but with a view to having the North American nations join the European league. The value of being an equal partner among a small group of closely aligned nations was not lost on Canadian officials. Norman Robertson, the Canadian High Commissioner in London, cabled Ottawa: "Ever since we have been in a position to shape our own policy abroad, we have had to wrestle with the antinomies created as a North American country and as a member of the Commonwealth, by our special relationship with the United Kingdom and at the same time ... with other nations in western Europe." In short, Canada appeared to find itself at the confluence of several regional concerns and could be a broker in bringing these concerns and the nations involved into some sort of association. This was not a new concept to Canadians. In July the previous year, Escott Reid, Pearson's senior advisor at External Affairs, had proposed a new regional security arrangement. It would go beyond Churchill's Iron Curtain vision to involve more than the three English-speaking nations and would foster economic and cultural links. The realization of this vision would have to wait, however, until the spread of Communism and the British call for assistance against the looming menace in

1948 spurred the US to act. From that point, it was not long until the drafting of the NATO charter, which was ratified by the member nations in April 1949. A number of related issues were more important to the North American partners: nuclear weapons policy, North American air defence, and industrial mobilization took centre stage. Less important were questions of land or maritime defence. The US took the lead on these matters, but Canadian officials were quick to take the necessary steps to ensure the integration of Canadian views, policies, and capabilities.⁴¹

There was no question that as the Canadian government and its senior officials, both civilian and military, wrestled with these issues, a complex series of cross-cutting questions and decisions arose. Although these factors would have important impacts on Air Force structures and acquisition decisions, they would also reverberate across both the nation and the alliance. It is to gain an understanding of the RCAF perspective that we now turn to these issues.

Compared with the period that is the focus of this book, the first thirty-five years of air activity in Canada had not been propitious for either the air service or Canadian aircraft builders. Despite Sir Alexander Graham Bell's successful first flight at Baddeck, Nova Scotia, in 1909 – a first for the entire British Empire – the fledgling Canadian Aerodrome Company had been unable to convince the Department of Militia to purchase any of its airplanes. When the Great War began, Minister of Militia Sam Hughes rather precipitously decided to form a Canadian Aviation Corps but elected to equip it with just one flying machine, an American Burgess-Dunne.⁴² Subsequently, as would happen again in the Second World War, it was decided to set up aircrew training in Canada through an extension of Britain's Royal Flying Corps, which provided the impetus to expand aircraft production. The government created Canadian Aeroplanes Limited (CAL), which bought out a small manufacturing operation previously set up in Toronto by American aviation pioneer Glen Curtiss and began manufacturing a modified Curtiss design that became known as the JN-4 Canuck. Over a twenty-one-month period, CAL built some twenty-nine hundred Canuck airframes in addition to a number of other smaller projects, including thirty F-5L flying boats for the US Navy.⁴³

After the Great War, there was no perceived need for a Canadian military flying service. This, coupled with a gift of some 114 surplus war machines, led to a rapid tapering off of manufacturing in the Dominion.⁴⁴ By 1922, however, Canadian Air Board officials had realized that there was a definite need for new types, better suited to the paramilitary work being undertaken by government fliers. The stopgap solution was to buy surplus flying boat hulls from the US Navy, but the Air Board was after a Canadian manufacturing capability.

A definition of air power for Canada had been developed in the closing days of 1918 by John Wilson, a naval bureaucrat who was to become the first secretary of the Air Board, and Major-General Willoughby Gwatkin, at that time the Canadian Chief of the General Staff, an army appointment, and soon to be the first Inspector General of the Canadian Air Force. In their view, air power included not just an air force but also the domestic ability to supply the fighting service with up-to-date equipment. The third component of their air power equation was an air transport industry.⁴⁵ The deliberate connection between the air force and aircraft manufacturers became a key, if not always effective, aspect of Canada's aviation experience and remains so to the present. It is this interplay between the RCAF and the major postwar builders that this book focuses on.

By the close of the 1920s, the aviation manufacturing situation in Canada was a relatively rosy one. Two British parent firms had opened Canadian operations. Canadian Vickers was producing a range of Canadian and overseas types in Montreal, and de Havilland had opened a factory in Toronto in 1928, selling 130 aircraft the following year.⁴⁶ By comparison, the situation for the RCAF was not so good. Tight money and lack of coordinated government support generally meant that the Air Force was obliged to buy what it could, when it could. The aviators were thus unable to offer the industry any sort of long-term requirements on which to base production plans. More often than not, the RCAF would end up purchasing aircraft in ones and twos at the end of a fiscal year. The Depression only made the dilemma worse, although the industry was able to continue making sales to commercial operators.

The second half of the 1930s saw a change of orientation on the part of the Canadian government. Given the deteriorating world scene, it was apparent that Canada would have to increase its defence establishment and at the same time spend more on defence equipment and activities. In terms of political expediency and public acceptability, Prime Minister Mackenzie King seized on the idea of concentrating efforts on building an air force that could be presented to Canadians as a potent home defence force. Moreover, air operations carried with them much more positive memories than the naval debate that had preceded the Great War, or the horrors of trench warfare experienced by the Canadian Corps.⁴⁷

Increased budgets did not immediately translate into new aircraft, however. Britain's industries, Canada's source of military aircraft from the beginning, were fully occupied in rearming the Royal Air Force.⁴⁸ And the British doubted, with some justification, that Canadian firms were even capable of producing the complex combat aircraft then being manufactured by the more experienced British factories. A 1939 British Air Ministry Mission concluded that there was

almost no existing capacity in the Dominion: engines and instruments would have to come from Britain (it would be impracticable, the study noted, to establish an aero engine production capability in Canada); there was no research and development (R and D) capability; and the trained workforce numbered only about fifteen hundred. On this evidence, the mission estimated that if Canada were given an order for 200 Wellington bombers, it would take two years from the time any orders were placed to get production started and another two years to complete deliveries.⁴⁹

That Canada could not turn to its own aircraft industry meant that, on the eve of war, its Air Force would have to make do with those few British types that it did have and hope that modest production, finally underway by 1939, would eventually be enough to equip its war structure of twenty-three squadrons.⁵⁰

Even when Canada went on a war footing in the fall of 1939, there was no overnight change in the aircraft procurement situation. Although the RCAF budget for the first year of the war exceeded \$77 million, and the Air Force was able to field fourteen operational squadrons, new problems arose in the form of the British Commonwealth Air Training Plan (BCATP), a massive and ambitious program to train tens of thousands of aircrew from across the Commonwealth on airfields scattered throughout the country.⁵¹ In 1939, there were neither the airfields, nor the instructional and support personnel, nor the aircraft. Measured from the perspective of the British Air Ministry's earlier judgment of Canadian capabilities, the requirements being made of the Dominion's aircraft builders looked daunting indeed. By the end of September, Britain was looking to Canada for production of 275 aircraft monthly: 200 trainers for the BCATP, 20 Stirling heavy bombers, 20 Hurricane single-seat fighters, and 35 Lysander army cooperation aircraft.⁵² This could only be considered a staggering demand on an industry that just a year earlier had produced a total of 282 aircraft.⁵³ What made the request all the more onerous was the great technical leap that Canadian factories would have to make in shifting production from small bush planes to large and complex fighters and bombers.

The political and fiscal situations were also far from clear for the first year of the war. King did not want to become too committed or spend too much, and British builders did not want too many orders placed in the Dominion, which could lead to lost profits or the creation of a potential postwar aviation industry rival.⁵⁴ All these factors combined to make the successful manufacture of large numbers of aircraft in Canada problematic during the first two years of the war.

With the fall of France in 1940 and the dramatic and very real escalation in the threat to Britain, Canada increased its defence spending from \$125 million

to \$681 million for fiscal year 1940-41. At the same time, a Department of Munitions and Supply (DMS) was set up under Clarence Decatur Howe, a successful industrialist turned politician. Howe and DMS were given the mandate to get defence production moving, and they worked tirelessly during 1940 to do just that. Once involved with aircraft manufacturing, Howe became one of its key proponents, and it was not long before he was seeking to maximize the potential of the aviation sector. Where King was reluctant to take on the production of four-engine bombers, Howe was not; he was of the opinion that manufacturing aircraft of this type would “complete the industry” in Canada.⁵⁵

Howe had come to Canada from the United States in 1908. Educated and qualified as an engineer, he taught at Dalhousie University and formed his own company to build grain elevators before entering politics and winning a Liberal seat for Fort William–Port Arthur (what is today Thunder Bay, Ontario) in the 1935 general election. King appointed him Minister of Munitions and Supply in 1940, with the mandate to coordinate Canadian and allied defence production requirements and manufacturing within the Dominion.⁵⁶

The entry of the US into the war at the end of 1941 changed the practices of building and distributing aircraft. Although the situation could be considered more confusing than before, with a three-way exchange of requirements, parts, and deliveries, it also meant that a large “common pool” had been created that would allow “all to draw from in accordance with their need.” By extension, particularly in the case of aircraft, “supply arrangements became so fluid, transfers and diversions so frequent, that it was not possible to isolate with any high degree of precision the contributions made in the matter of aircraft and air supplies by one Commonwealth country to another, or between the United States and their allies.”⁵⁷

To the air marshals who understood the need to put scarce resources in the hands of those with the greatest operational need, a system with this sort of flexibility should have seemed ideal, and if all participants in the process had had equal access to the resources, it would have been just that. In the first days of 1942, however, Canadian aviators would find that despite their country’s significant contributions to allied aircraft production, their own needs were not being fairly considered. For Howe, on the other hand, the business case was clear. Production was up and deliveries were being made. That Canadian aircraft did not always make it to the RCAF seemed less important. Thus, there were documented cases where the RCAF could not get its hands on aircraft being produced in Canada. One such example occurred during the panic after Pearl Harbor caused by the largely imaginary threat to the West Coast. The RCAF requested some of the Hurricanes then being built for the RAF by Canadian

Car and Foundry at Fort William, ironically in Howe's own riding. The request was refused by the allied munitions coordinating body – the Munitions Advisory Board – and the aircraft were sent overseas.⁵⁸

Problems and differences of opinion aside, by the end of the war Canada had produced over sixteen thousand aircraft for the allied effort. Strikingly, however, no engines were produced in Canada, a circumstance not lost on the senior Air Force and industrial leaders. Even before wartime production had reached its peak, and not many months after the Hurricane incident, senior RCAF officers were looking at the question of postwar aircraft needs and production. The aviators, perhaps even more than Howe, had long recognized the value and potential of the aircraft industry.

The chapters that follow describe the successes and failures of fighter aircraft procurement in Canada between 1945 and 1954. Unlike the decade following the First World War, this was a period when the military potential of air power was both well understood and generally accepted by politicians and the military. It was also a time when the world could not presume that there would be no more war.

Before turning to the details of that story, it is necessary to set out my argument. Armed with the context just presented, I began to look at both secondary and primary sources touching on the first postwar decade. After an initial review of the material, it seemed that the primary sources were offering me a different interpretation of events than those that I was seeing in the secondary material. Quite simply, I came away with the hypothesis that RCAF leaders had played a significant, often crucial, role in the formulation of defence policy and subsequent equipment decisions. In contrast, none of the secondary sources that I consulted had given me useful clues to the part played by these leaders and their staffs. Many months later, a review of my findings led me to formulate the following conclusions.

First, the shape of the RCAF by 1954 was not that envisaged by the air marshals or politicians in 1945. That said, Air Force leaders had not sat mutely waiting for the politicians to design defence policies and force structures before going off to form the squadrons and fly the associated aircraft. Instead, they had developed a coherent concept of what the RCAF could and should be, which, though properly subordinate to the direction of the country's political leadership and frequently influenced by international developments, was founded on sound analysis. This is not to say that all recommendations and internal decisions were right and that time and energy were not occasionally wasted pursuing poor ideas, but, by and large, the leaders of the RCAF maintained both their direction and their reason throughout a challenging decade.

Second, support for a domestic defence aviation industrial base proved problematic and costly. One of the RCAF's most basic beliefs was in the need for a national capability to produce combat aircraft. Air Force leaders had convinced the politicians of the importance of this capability even before the end of the Second World War, and although the decision to build and buy in Canada was ultimately made by Cabinet, the logic and impetus had come from the Air Staff. Once embarked on this program, the air marshals displayed a fundamental sense of accountability. Their central purpose was to produce the best possible aircraft but to do so within the limits of the available funds: pragmatism and fiscal probity were the basis for decisions. Where resources were constrained, interim solutions were found. When one source of aircraft or parts failed, other suppliers or alternative designs were used. In short, the air marshals sought fast, inexpensive yet effective solutions to their operational problems. They were not beyond cutting a fully domestic program if it could not satisfy overriding needs, no matter how politically and philosophically attractive the made-at-home alternative might have originally appeared.

Third, Avro, the manufacturer of the CF-100, was incapable, at the time, of meeting the demands for increased production resulting from the Korean War. In 1945, the RCAF had set out to develop, build, and operate a Canadian jet fighter of impressive standards. When that aircraft, the CF-100, did not get off the drawing board in time to meet either expected or unexpected needs, the Chief of the Air Staff and his deputies were not slow to seek and employ another aircraft, the F-86. At the same time, senior politicians were more than ready to prod Avro towards meeting its obligations.

Overall, the crash program of 1950-54 fundamentally changed the force structure, roles, and deployments of the RCAF, disrupting the moderate plans for organizing and equipping a fighter force with the CF-100 as its centrepiece. Then, in the same way that a unique combination of events had permitted the Air Force to believe it could realize its dreams, a change in circumstances led to a rearticulation of national priorities. In 1954, with the end of NATO's scramble to build up field forces to stabilize the Communist threat, Canada, like its alliance partners, was able to reduce the emphasis on defence spending. By that year, the RCAF had deployed its postwar indigenous fighter capability – not as originally planned but to its satisfaction and credit nonetheless.

2

Planning for Peace

NEARLY THREE YEARS BEFORE the end of the Second World War, the Royal Canadian Air Force began to think about functions, organizations, and aircraft needs for the coming peace. Regardless of which question the air marshals and their political leaders addressed, the overriding element always seemed to be finances. Despite budget limitations, a small group of Air Force leaders succeeded in gaining support for a domestic capability to design and build warplanes. Then, in the closing months of 1945, the air marshals presented a plan for a small but balanced air arm that accepted the inevitability of using obsolescent wartime fighters.

Throughout the following year, as the federal government and the services re-established peacetime relations with the allies and began to see the potential seriousness of the Soviet menace, much attention centred on the RCAF. Although the senior services did not like the notion, it became apparent that the Air Force now formed Canada's primary line of defence. This was all the more reason to take the first tentative steps in adapting the philosophy of a domestic aircraft capability into viable fighter production. Throughout all of this, the leaders of the Air Force were at the centre of both the decisions and the action.

The first discussions of postwar RCAF requirements were based on the need to have a product that a postwar aircraft industry could manufacture and that would at the same time assure the Air Force of a domestic source of combat aircraft. On 6 November 1942, Air Vice-Marshal (A/V/M) E.W. Stedman, the RCAF's Director General of Air Research, initiated discussion of a postwar aircraft industry based on the design and production of service (combat) aircraft. The proposal was supported by the Air Staff and the Chief of the Air Staff, although the requirement was shifted away from a combat aircraft to a commercial transport type.¹ By 12 February 1943, Ralph Bell, Director General of the Aircraft Production Branch of the Department of Munitions and Supply (DMS), the federal department charged with all defence production, was able to report that his minister, C.D. Howe, had been briefed and supported the idea completely. Bell asked the RCAF to develop requirements for "at least two post-war commercial types, one of which will be a four-engined transport."²

Interest remained focused on the transport requirement, and during the first half of 1943 considerable work to define the requirement was done by both the RCAF and DMS.³

On 20 May of that year, Stedman reminded the Chief of the Air Staff (CAS) that in his initial suggestion he had talked about combat aircraft. He held that there would be no need for large numbers of transports and that if it did not build combat aircraft, Canada would find itself once again obliged to go to its allies for warplanes.⁴ Despite his urgings, at the first meeting of the Committee on Post-War Manufacture of Aircraft, held on 7 June 1943, A/V/M Alan Ferrier, the Air Member for Aeronautical Engineering (AMAE) (the RCAF's senior aeronautical engineering officer), stated that the Air Council, chaired by the minister, C.G. "Chubby" Power, was "of the opinion that Canada should not attempt to embark upon the design and development of combat aircraft in competition with other major powers."⁵ (It should be noted that when the minister was present, the senior decision-making body was known as the Air Council; when the minister was absent, the group was identified as the Air Members.)

Several months passed before additional high-level attention was paid to the issue. Then, at the beginning of March 1944, Ferrier, in a precis to the Air Council, reminded the members that in early 1943 they had been of the opinion that "a sound Aircraft Industry capable of producing its own designs was an absolutely essential foundation for future Canadian air power." If the Council's premise had been correct, said Ferrier, the time had come to place actual orders for aircraft so that the industry could survive in the coming years.⁶ Ferrier returned to the Council on 18 April and gained general support for approaching DMS with a proposal to conduct a competition for a two-engine general utility crew trainer, not unlike the existing and successful Avro Anson. The value of this competition was estimated at \$1 million and would allow for two bidders to build three trial aircraft each.⁷ This was not a large sum of money, yet when the proposal was presented to the Treasury Board in early May, it was set aside for three months based on an earlier Cabinet War Committee (CWC) decision to temporarily defer all postwar projects.⁸

It was not until the fall that the money was approved for the trainer. At the CWC meeting of 27 September 1944, the issue of the postwar aviation industry was again tabled. Development money for the trainer was not the only air issue on the agenda; Aircraft Lodge Number 712 of the International Association of Machinists, a union local in Montreal, had written to the Prime Minister expressing concern over possible employment opportunities. Where the RCAF had failed to get Cabinet's attention, the voters succeeded: the CWC "approved, in principle, the recommendation ... for the expenditure of up to \$1,000,000

for design and construction of prototypes” for the trainer.⁹ Postwar national stability and economic health would become increasingly important, as Howe’s April 1945 White Paper on Employment and Income, offering policies aimed at ensuring full employment, would show, but the driving force for postwar activity in military aircraft design and manufacture came from the RCAF.¹⁰

Although this decision represented a move towards designing an aircraft for the Air Force, it was not by any stretch of the imagination a combat aircraft. Still concerned, Stedman did not let the matter rest and prepared a memo that was reviewed by the CWC on 3 May 1944. The document laid out the problems that the RCAF had experienced up to that point in the war as a result of not having domestic aircraft design or manufacturing capability to meet Air Force needs. He argued that this could not be allowed to persist but cautioned that government’s commitment would be considerable and long-term. He went on to add that Canada was losing talented aeronautical personnel to other countries where they could find opportunities to work on advanced aircraft. If the government was going to support the aeronautical manufacturers, it should do so in a way that would keep these people at home. He pointed to the new field of jet propulsion and recommended that research be started with a view towards developing a propulsion unit for service requirements. The CWC noted these points and agreed to re-examine the matter in three months.¹¹

The whole question of aircraft engines was a touchy one, for there had been a highly visible debate in 1940, resulting in a decision by Cabinet not to build engines in Canada during the war.¹² By November 1943, it appeared that sufficient time had passed to reconsider the question. Discussion among members of the Air Council suggested that C.D. Howe’s only concern was that no effort should be expended on setting up manufacture of any engine already in production. Might it not, the minutes of the 10 November Air Council meeting recorded, be appropriate for Canada “to prepare the specifications for an experimental type of aircraft, such as a fighter or small bomber, to use the [jet] engines being developed”?¹³ Ralph Bell was very much in favour of the jet propulsion initiative, and although he disagreed with Stedman’s combat orientation for the postwar industry, he believed that Canada should go “all out,” not just in research but also in design and manufacture.¹⁴ Even Howe was keen on the idea. In an address to the Canadian Manufacturers’ Association on 14 June 1944, under the general theme of using wartime industrial initiatives as the basis for postwar growth, he pointed to jet propulsion as a prime example. He explained that the government was already starting research in the field, and stated, “the gas turbine promises to become a prime mover, ranking in importance with the steam engine and the present day combustion engine.”¹⁵

Howe's first exposure to jet engines had come some eighteen months earlier. In October 1942, he and Bell had visited England and had been briefed on jet engine developments.¹⁶ Returning to Canada, they had immediately set about exploring the technology. The prospect of researching a new means of aircraft propulsion apparently caught on quickly both in DMS and the RCAF, and over the next three years Canada sent many young engineers to Britain for training, while at the same time helping the British with cold-weather trials in Canada. The newly trained Canadians set up a domestic R and D operation known as Turbo Research Limited, which in early 1945 was awarded a government contract to design a 4,200-pound-thrust research engine that was given the designator TR-3.¹⁷

It was fine to do research in jet propulsion, given that the field was so new, but at the 6 September 1944 Air Council meeting, the AMAE recommended that since Turbo Research was not necessarily working towards a flying capability, the RCAF should go forward with a firm requirement for twenty engines (of 3,400 pounds static thrust) and "not less than three samples of [a] long range jet propelled fighter." Just over \$2 million would be earmarked, \$1.34 million for the engines and \$720,000 for the aircraft, with these funds to be spent over fiscal years 1945-46 and 1946-47.¹⁸ This was approved by the Air Council and the matter was tabled in Cabinet on 13 December. Both Howe and the Minister of National Defence, General Andy McNaughton (who had an extensive engineering background), "felt that this proposal was of considerable importance and that approval should be given, at least for the preliminary work involved." The CWC approved the design, reserving the question of manufacture for later.¹⁹

On 14 March 1945, Stedman provided Turbo Research with the specifications for both a Single-Seat Jet Fighter and an associated Gas Turbine Jet Propulsion Engine.²⁰ He appeared to have won his initial argument for a domestic capability to design and build combat aircraft. His persistence and the eventual support from the RCAF high command had been the catalysts for the government's decisions.

These were bold plans for a nation that was still having trouble even constructing contemporary aircraft designs of British and American firms. De Havilland's difficulties in producing the Mosquito fighter-bomber at its Toronto factory demonstrate the challenge; although the firm would produce close to a thousand aircraft of this type, the early stages of the project were plagued with trouble. Indeed, even after the decision to manufacture the aircraft in Canada was made in 1941, major problems persisted for the better part of two years. The difficulties illustrate the range of critical challenges that were involved in producing sophisticated foreign aircraft in Canada in wartime. Manufacturing data

and drawings, and various subassemblies such as hydraulic components, had to come from England. Two sets of the former were lost at sea, and although Canadian firms were supposed to be capable of manufacturing these various components from the engineering plans, they proved unable to meet deadlines, thus necessitating the supply line from England.²¹ The irony of British plants providing the wherewithal for Canada to support Royal Air Force needs was hard to miss, and yet the de Havilland experience was not unique: difficulties of similar nature and complexity were commonplace throughout the industry. Whether or not things would be better when the new fighter was produced from scratch in Canada would become apparent in just a few years.

Possible production challenges aside, even if the postwar types could be designed and manufactured in Canada, there was not, by the end of the war, a definitive military need for such advanced aircraft. Even as discussions of post-war supply issues continued, 1943 also witnessed work on the design of a peacetime air force. In December, Air Commodore (A/C) K.M. Guthrie prepared a “Brief on Post-War Planning for the Royal Canadian Air Force” that called for an air force capable of offensive and defensive actions and of swift conversion from peace to war. The RCAF, he proposed, would maintain a balanced force of sixteen to seventeen squadrons capable of all major combat functions. It was assumed that initially the RCAF would operate modern wartime aircraft, and that there would thus be no need for new procurement for about five years.²² Guthrie’s report was just the first step. The Post War Organization Committee – RCAF was formed on 12 February 1944 at AFHQ, with a mandate “to develop and prepare proposals for the organization, operation and administration of the Post War RCAF, including Regular, Auxiliary, and Reserve.”²³

Part of the remit called for a review, among other issues, of “organizational structure, employment and operational requirements, including services for other Government Departments.” In order to conduct this organizational review over the summer, the committee sought the views of senior fliers and staff officers. Submissions to the committee covered the full range of concerns, but few of them proposed aircraft requirements in any detail – that is, by type and quantity. Those officers who did make such proposals stuck firmly to existing service models. Wing Commander (W/C) E.W. Beardmore of RCAF Station Coal Harbour wrote, for example, that the aircraft employed should be of contemporary standards, but “the numbers of the most modern aircraft [should] be limited, however, as they become obsolete very quickly.” Group Captain (G/C) A.A. Rabnett of Vancouver replied that “aircraft should be of Canadian manufacture and American standards.” Both of these sentiments would return to council tables over the next decade. The committee itself recommended forty-three squadrons operating over a dozen types of operational and training

aircraft, with a total complement of close to nine hundred machines. Chubby Power took a version of this plan to the CWC on 27 September: operating forty-four squadrons, the RCAF would employ 45,000 Regular and Auxiliary personnel and have an annual budget of some \$60 million. The CWC noted the proposal.²⁴

By early January 1945, Air Force planners were able to state what the flying units would need in terms of aircraft, at least in a global sense. A memo was circulated by the Assistant Chief of the Air Staff on 16 January 1945, advising the Air Member for Supply and Organization (AMSO) of the estimated aircraft numbers after the end of the war. The total was 2,132, of which only 290 were for Regular operational squadrons. Another 696 were for the Auxiliary squadrons, and the balance were for all types of flying training. As anticipated, no postwar designs were included in the estimates.²⁵

Perhaps it was these seemingly grandiose plans on the part of the RCAF and similar schemes from the other services that caused the CWC to revisit the issue of the postwar defence establishment. On 29 March 1945, Cabinet directed the Advisory Committee on Post Hostilities Problems to “initiate a preliminary study of the nature and extent of the Permanent Forces which Canada should establish and maintain in the period following the cessation of hostilities.”²⁶

The services’ plans were transmitted to Cabinet in June. The total bill, estimated at \$290 million, did not compare favourably with the 1939 budget of \$35 million.²⁷ Some weeks later, following a new round of considerations, Colin Gibson, the new Minister of National Defence for Air, was able to table a revised RCAF proposal at the first postwar meeting of the Cabinet Defence Committee (CDC) (as the CWC was renamed after the end of hostilities) on 13 August 1945. The revised model called for 30,000 personnel and a budget of some \$79 million. As for new aircraft, the proposal stated, “estimated cost was based on the assumption that there would be a fully equipped Air Force on the cessation of hostilities and that only a negligible amount of equipment replacement would be necessary in the first five-year period.”²⁸ This repeated the premise advanced by A/C Guthrie in 1943 and suggested that decision makers might have to juggle the jet fighter decisions of the spring: a research project, yes; operational capability, not necessarily. When the CDC met again the following day to discuss establishments, Gibson announced that he had met with his service advisors and was now able to recommend a 20,000-strong air arm with associated costs of just under \$60 million.²⁹

Discussions continued over the next month, until it was decided on 24 September that despite the uncertainties of the issue, given the “desirability of having some reference made at the present session of Parliament,” Gibson should

state that for planning purposes the Air Force was using a figure of between 15,000 and 20,000.³⁰ Meeting just four days later, the full Cabinet decided that the statement in the House should be prefaced with the caveat

that, until some estimate could be made as to the nature and extent of Canada's international commitments and the effects of new weapons, it was not possible to assess with any degree of accuracy Canada's defence requirements and, consequently, no final decisions could be made as to the exact size and composition of the forces Canada should maintain in the postwar period.³¹

Gibson tabled the RCAF estimates on 4 October. Starting with the rationale approved by Cabinet, he indicated that the Air Force would have Regular, Auxiliary, and Reserve components, with the Regular component covering all Air Force roles, including bombing, air defence, and transport. Strength would, however, be limited to just ten Regular squadrons, of which two would be fighter units using wartime aircraft. There were criticisms, but the government held fast to its belief that it was too soon to commit to any significant course of action.³²

Force size, new aircraft, support to industry – all of these issues were moot until the government decided that it was going to continue spending a considerable portion of its budget on defence once the war ended. In this, C.D. Howe, as Minister of Munitions and Supply, appeared to be the voice of experience and decision. And yet, depending on his mood, he could also sound more like the voice of doom. In the early days of 1944, Howe had met with Gibson and the CAS to discuss the future of the aviation industry, particularly whether Canada should have a domestic design capability to meet RCAF needs.³³ Soon after, on 12 February 1944, Howe sent a memo to Ralph Bell in which he indicated that it was too early to say what commitments the government could or would make to the industry: "I suggest that the airplane business in the post-war period must not expect to find itself a ward of the Government. In that position it will be no different from any other peacetime industry. Much time and worry can be saved by accepting this fact now."³⁴ Howe continued to sound this same general theme throughout 1944, urging all industries to look to the future and organize themselves for peace,³⁵ but his thinking on aviation had not been missed. Reacting to the industry minister's philosophy, A/V/M Ferrier wrote to the CAS on 28 February that he felt that the previous year's efforts had in effect been wasted. He concluded that, left on its own, the civil air transport sector would be unable to generate enough demand for manufacturers to succeed.³⁶

It is likely that word of Howe's views got out, as less than three months later he was taking somewhat the opposite tack. In discussing a submission to the CWC by seven private aircraft manufacturers, he suggested that even though the aircraft industry would shrink at the end of the war, some special assistance should be considered to promote design and development initiatives. A supporting brief indicated that the industrialists' proposal sought financial support through a number of strategies, but, importantly, asked the government to determine its postwar requirements and to place design and development orders with the private manufacturers. The CWC asked the Ministers of Munitions and Supply and of Finance to report back to it.³⁷

In the coming months, the politicians would continue to weigh the pros and cons and to watch their bottom line – and a fine line it was between supporting aircraft production and abandoning the industry to the postwar shutdown of the armaments sector. The CDC's change of direction, just weeks after the end of the war, illustrates the point. The CDC revised the purchase quantities for North Star transports at its meeting on 24 September 1945. Although a contract had been signed in March for seventy-four aircraft to meet RCAF requirements, the Air Force now needed only fifty transports and could make do with twelve for fiscal year 1946-47. After a Cabinet meeting the following day, Veterans Affairs Minister Ian Mackenzie (formerly Minister of National Defence), Finance Minister James Ilesley, Prime Minister King's Quebec lieutenant Louis St-Laurent, and C.D. Howe together decided that a contract for the first twelve aircraft should be signed but that the order for the balance should "be the subject of subsequent consideration."³⁸ It seemed very much a question of defence production if necessary.

Indeed, in Canada, as in most contemporary Western nations, the state acquires military equipment as the result of a long process. The process starts with the definition of national security policy, which, when compared with the threat, permits the development of an adequate military structure, the latter in most cases involving a certain amount of equipment procurement. Staff and war colleges throughout the NATO alliance teach this fundamental process, but at the end of 1945, Canada had not completed any such coordinated analysis. Bits and pieces of the process were underway, but there were overlaps and gaps.

As early as 1944, policy planners had speculated that, with Germany and Japan out of the way, the greatest postwar threat would come from the Soviet Union. In addition, there seemed little chance that Canada and the US would return to their prewar positions of isolation, particularly in light of advances in aircraft capabilities. In May that year, the Working Committee on Post-Hostilities Problems, made up of senior officials from all departments, identified nine areas

of cooperation with the US. Airfields and radar systems in the north, along the transpolar route from Russia to North America, were on the list.³⁹

On 30 June 1945, the Joint Planning Sub-Committee, made up of members of the three services, completed a study titled “Strategic Factors Affecting Canada’s Post-War Military Requirements.” The precis noted, among other things, that Canada would have to play a greater role, proportionate to its place in the world, and would have to be prepared to act in concert with either the Commonwealth or the US. Advances in air power were considered a major factor, with two possible effects being recognized: (1) North America was now vulnerable to airborne and air-landed incursions, and (2) there was far less time to mobilize forces than prior to 1939. No nation was identified as a specific threat, but incursions were considered most probable in the North. It was felt that the US would be particularly concerned by such acts of aggression and would want to assist in its own defence as well as that of Canada. A brief list of preparations noted the need for “‘Regular’ forces immediately available” and for “adequate arrangement for the development and production of military equipment.”⁴⁰ This was not much of a threat assessment to go on, but it did at least provide a starting argument for maintaining a credible military capability.

Throughout the fall of 1945, the Air Staff worked busily, in conjunction with the Post-War Planning Committee, on a proposal for a postwar air force. A/V/M Wilfred Curtis, then the Air Member for Air Staff and effectively the second in command of the RCAF, sent the draft document to his Chief, Air Marshal Robert Leckie, on 29 November. Leckie was born in Britain and served in the Royal Naval Air Service (RNAS) during the First World War. After a brief time in Canada after that war, he went back to Britain and the Royal Air Force. In 1940, he returned to Canada in conjunction with the British Commonwealth Air Training Plan (BCATP). He transferred to the RCAF in 1942 and became CAS in 1944. Curtis, too, began his flying days with the RNAS. After the First World War, he set up and ran his own successful insurance company in Toronto but remained active in the RCAF Auxiliary and returned to active duty in 1939. After holding senior appointments in Britain, he returned to Canada in 1944 and replaced Leckie as CAS in 1947.⁴¹

In his assessment, Curtis felt that “there do not appear to be recorded anywhere, adequate terms of reference officially approved by the Government upon which to base our post-war plan, and give us good grounds for future increased requirements.”⁴² The draft plan, therefore, stated a number of premises that established the *raison d’être* for the RCAF, some of which would be important to force structure and procurement decisions over the coming months and years:

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- 1 The primary function of the Royal Canadian Air Force is the maintenance of an air force in sufficient strength and readiness to uphold national policies and interests and in concert with the Navy and Army to guard Canada from attack.
- 5 For planning purposes the Cabinet has approved the strength of the RCAF Regular at 15,000 to 20,000 personnel. In light of the uncertain [security conditions within the world] this plan is based on a strength of 20,000 personnel which is the minimum practicable figure for a small balanced Air Force.
- 10 To be effective, the RCAF must be equipped with the most modern types of aircraft available and, as these aircraft become obsolescent, must be re-equipped with up-to-date types.
- 11 Aircraft, equipment and facilities are available in sufficient quantity for the initial equipping of Regular and Auxiliary squadrons ... The plan provides, therefore, for the utilization of existing types of aircraft with the intention of a gradual re-equipping, as dictated by developments and in accordance with RCAF operational requirements.
- 12 Consequently the aircraft equipment programme of this plan is based on five years for types which are presently available and for which no additional purchases are necessary, such as Harvards, Lancasters, etc. and it is also based on five years for new up-to-date types [such as the North Star].⁴³

While overall the force structure called for balance between full-time and part-time units, it was thought that the larger and more complex aircraft should be operated by the Regular squadrons: three heavy bomber, three heavy transport, one photo, one fighter reconnaissance, one fighter-bomber, and one artillery observation. The Auxiliary squadrons would number twelve fighter, two fighter reconnaissance, and five fighter-bomber. Once training and liaison aircraft were factored in, along with wastage, workshop reserve, and a small “unforeseen commitments” factor, the total requirement came to 1,898 aircraft ranging from Lancaster bombers and North Star transports down to gliders. The associated annual operating costs were \$53 million, but this did not include capital costs for the replacement of aircraft.⁴⁴

Within the fighter and fighter-bomber squadrons, both Regular and Auxiliary, there would be only two types of aircraft. In keeping with the notion that the end-of-the-war types were adequate for the coming five years, the Air Staff selected, not surprisingly, the most recent variants of the Spitfires and Mosquitoes that RCAF personnel had been operating in Europe.⁴⁵

Postwar establishments for all three services were presented to Cabinet on 19 December. Prime Minister King set the tone of the deliberations by referring to the need to cut costs as quickly and significantly as possible, and to release

from service as many men as possible to keep the economy going. The Navy plan called for 10,000 Regular and 18,000 Reserve personnel operating twelve major and many minor warships. The naval budget for 1946-47 (including demobilization costs) totalled \$45 million in recurring costs (costs that could be expected annually), with another \$30 million in one-time costs. The Army plan included an "Active Force" of 25,000 that would form a cadre for an army of two corps and provide for headquarters and special troops. A "Reserve Force" of 180,000 would provide the troops for a six-division and four-brigade force to flesh out the Regular cadre. The budget for these plans would be \$70 million recurring and \$74 million non-recurring. As for the RCAF,

Air Staff proposals provided for a peace strength of 20,000 for the Regular Force, 10,000 for the Auxiliary and 25,000 for the Reserve. The Regular Force would consist of 10 operational squadrons and 8 composite flights, with necessary headquarters, commands and training, maintenance and ancillary units and formations. The Auxiliary Force would comprise initially 19 squadrons, with an additional 9 squadrons at some future date. The Reserve would consist of former active members of the R.C.A.F.

The proposal went on to indicate that estimated annual costs on this basis would be \$57 million, of which \$45 million would be required for the Regular Force, \$8 million for the Auxiliary, and \$4 million for the Reserve. Such estimates were subject to a number of necessary qualifications and excluded abnormal commitments, such as the operation of the Northwest Staging Route and associated landlines, and commitments in Newfoundland and Europe. Cabinet agreed that, as long as the finances were acceptable, the Navy and Army could implement their plans as presented. The Air Force, on the other hand, was directed to develop a new plan.⁴⁶

No time was lost in returning to Cabinet with new proposals. Curtis's figures of the fall had included a range of 15,000 to 20,000 Regulars, and two new options were developed by the Air Staff in the first weeks of January 1946. For purposes of comparison, the original force structure of 20,000 was called Scheme A. The second option, Scheme B, was a new proposal and required 16,100; Scheme C was based on a total of 15,000 and was submitted in accordance with Cabinet's direction.⁴⁷ Meeting on 6 February, Cabinet considered the new figures:

It had been found that the only practical way of reducing to the number to 15,000 was by eliminating the bomber reconnaissance squadrons, three of which were provided for in Scheme "A." Since the Chief of the Air Staff did not consider that

a balanced Air Force could be constituted without combat aircraft for long range reconnaissance, bombing and anti-submarine defence, Scheme “B” had been developed so as to retain two four-engine bomber reconnaissance squadrons. This proposal, while precluding an equitable distribution of units through the provinces, would, in the opinion of the Air Staff, provide a force composed of all essential elements and might be regarded as an acceptable compromise. The studies undertaken had indicated that a strength figure of between 16,000 and 17,000 was the critical level.

Accordingly, approval of Scheme B was recommended; its estimated total annual cost was \$59,150,000. Given the wholesale demobilization then underway, it was not anticipated that the Air Force would be rebuilt sufficiently to reach this total establishment for another two years, and the annual cost until that time would be proportionately lower. After considerable discussion, Cabinet “approved in principle Scheme ‘B.’”⁴⁸ Approval “in principle,” of course, left the gate open for either further cuts or expansion. It is interesting to note, however, that although the range of options presented to the CAS by Curtis in the fall had allowed for an air force of 15,000 Regulars, Air Staff calculations for a minimum viable air arm had apparently crept up over the last weeks of the year.

Whatever previous concerns there had been, it was fairly obvious that the government was prepared to stand behind its decision – at least that was the tone and the content of an address given by Colin Gibson to the Empire Club of Toronto on 28 February. The Minister of National Defence for Air outlined the various components of the new Scheme B structure and their associated costs. At over \$55 million annually, this was not a cheap operation, but it afforded a “measure of security” and, among other things, offered benefits “from a considerable amount of research which is being undertaken to keep the Air Force abreast of the times.”⁴⁹ The link back to industry would not have been lost on the industrial elite of Central Canada.

While Gibson was extolling the strengths and potential of the future air arm, senior aviators were sharing details of Scheme B with Britain and the US. On 12 February, Air Marshal Leckie wrote to his RAF counterpart, Sir Arthur Tedder, to explain in somewhat muted terms that his Regular air force was now down to just eight operational squadrons, of which only three were fighters. In the current situation, “I have based all my plans upon the ability to expand rapidly, and any inherent virtue the scheme now has lies in that direction.” An attached summary described the key features of the plan and showed that Canadian fliers would be operating Spitfires and Mosquitoes.⁵⁰ How odd, then, that just two weeks later, in a similar document sent by Curtis to the US military attaché in

Ottawa, all reference to Spitfires was deleted and replaced with the de Havilland Vampire jet fighter.⁵¹

The explanation for this sudden shift becomes apparent in the introductory paragraphs of the April 1946 final version of what was now being called Plan B. In the foreword, Leckie called the document the “Peace Plan” and said that it would be subject to continuous change (how right he was!). It began by stating the philosophical posture of the RCAF:

As it is not practicable for Canada to maintain a large Air Force capable of undertaking war operations on any considerable scale, at short notice, the peacetime RCAF must of necessity be a well balanced nucleus of highly proficient personnel, which is capable of rapid, efficient expansion as quickly as possible as a combatant Air Force.

The RCAF will consist, therefore, of a well coordinated training organization, some squadrons of types designed to provide material for expansion into a fighting force, and the staff and organization necessary to support them.

It has been necessary to plan initially for an orthodox force, but it has been borne in mind that changes will have to be made as technological advancements in aircraft, weapons and the utilization of atomic energy, demand.⁵²

Subsequently, the document recognized both the existence of Canada’s international associations and the undefined nature of any related security commitments: “This plan is not based on any decisions as to commitments which Canada may be called upon to meet by the United Nations Organization.”⁵³

The equipment policy for aircraft was laid out in more definite terms:

To be effective, the RCAF must be equipped with the most modern types of aircraft available, and as these types become obsolescent, must be re-equipped with up-to-date types ... If the RCAF is to remain effective, it must not be forced to rely on aircraft that have become operationally obsolete, notwithstanding their mechanical condition.

Aircraft, equipment and facilities are available in sufficient quantity for the initial equipping of Regular and Auxiliary units, *and this plan does not provide for their re-equipping as the latter depends on factors which are at present indeterminate* [emphasis in original]. The plan provides, therefore, for the utilization of existing types of aircraft, with the intention of gradual re-equipment with modern types as they become available.

The actual equipment plan was based on five years of use of types existing in sufficient quantity such that there would be no need for additional purchases

TABLE 2.1

RCAF Plan B fighter units

Type		Units	Aircraft per unit
Regular squadrons	Fighter reconnaissance	1	12 Vampires
	Fighter-bomber	1	15 Mosquitoes
	Trials units	2	10 of various types
Auxiliary squadrons	Fighter	5	8 Vampires
	Fighter	2	8 jets
	Fighter	4	8 Mosquitoes
	Fighter reconnaissance	1	8 Mosquitoes
	Fighter-bomber	1	8 Mosquitoes

Source: DHH, file 181.004(D44), “Plan B – Post War Plan for the Royal Canadian Air Force,” April 1946, ch. 2, para. 14.04, ch. 3, para. 29.02.

TABLE 2.2

RCAF Plan B fighter requirements

Unit establishment (UE)	Wastage (3 years)	Workshop reserve	Reserve	Total
79	84	20	–	183
67	79	17	70	233

Source: DHH, file 181.004(D44), “Plan B – Post War Plan for the Royal Canadian Air Force,” April 1946, app. G.

and on three years of use of obsolescent types “such as the Spitfire and Mosquito” of which there were sufficient stocks to meet requirements.⁵⁴

The details of the plan called for the units shown in Table 2.1, with the required numbers of aircraft shown in Table 2.2. Even the official plan lacked precision, however, for although the text of Plan B might talk about the Spitfire, specific aircraft needs reflected Curtis’s 28 February letter. Indeed, one might speculate that in leaving the type of “jet” undetermined in the case of the Auxiliary fighter squadrons (see Table 2.1), some keen staff officer was thinking well beyond what was possible. One might even posit that, as limiting as the government’s restrictions on the Air Force may have been, there was still a thread of optimism and vision both at the staff level and in the hopes of the future head of the RCAF. This is the positive interpretation of this imprecision. The other possibility is that there was just too much uncertainty for a precise statement of what aircraft might or might not be available when the plan was finally implemented. It was

perhaps indicative of the rapid changes going on at every level of the RCAF and the government. In November, as the Air Members reviewed the activities planned for the coming year, they agreed that a series of progressive stages would be needed, each about six months long, in order to implement Plan B effectively.

THERE HAD BEEN CONSIDERABLE confusion in moving from a massive war establishment to a smaller peacetime air force, yet the basis of the program seemed logical and had been accepted by the government. The Air Force now had defined a structure and organization. Personnel policies and decisions could follow from these, permitting the manning of units and organizations. As luck would have it, and as will be discussed in the following chapter, there was no need to go out and acquire new airplanes, since these were at least either available or on order. As it was, the Air Staff predicted that the postwar organization would not be in place and operational until near the end of 1947 or later.⁵⁵

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