CANADA

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NEW FIGHTER AIRCRAFT INDUSTRIAL BENEFITS

ANALYSIS AND EVALUATION

Background

1. It is the Government's policy that major offshore procurement programs, such as the New Fighter Aircraft, the CP-140 Aurora, and the Leopard Tank must bring identifiable and appropriate industrial benefits to Canada, partly to compensate Canadian industry for the loss of engineering and manufacturing work it would have performed had domestic sources been used and partly to help the trade balance. Although major industrial benefit programs are self-contained in the sense that they are individually negotiated, administered and accounted for, they are, generally speaking, included in the accounts ledgers of the Canada/United States Defence Production Sharing Agreement in cases where the defence equipment is purchased from the United States.

2. In the case of the NFA, the basic objective of the Department of Industry, Trade and Commerce was to achieve a satisfactory mix of legally enforceable obligations which would benefit a broad cross-section of the Canadian economy. More particularly, as stated in the NFA Request for Proposal (RFP), it was hoped to:

a. minimize the economic cost to Canada of the program;

b. establish a Canadian industrial capability including engineering cognizance for life cycle support of the aircraft weapon system procured;

c. improve the capabilities of Canadian industry by stimulating technological advancement through the transfer of technology and the exercise of Canadian resources in the areas of design, development and manufacturing;

d. improve the competitiveness of Canadian industry and its access to world markets by establishing its autonomy in selected manufactured products and services;

e. provide a suitable workload to utilize the resources of Canadian industry in order to meet Government objectives of stable employment and regional distribution of industrial activity;

f. stimulate Canadian exports consistent with trade and foreign policy objectives, particularly in those areas which have been the recipient of substantial government assistance; and

g. reverse or reduce Canadian imports in aerospace products and other manufactured goods and services.

3. In the context of the above, items of particular interest during the negotiations were:

a. benefits to be achieved in the Aerospace and Electronics industry sectors, with special emphasis on the technological aspects of benefits to be placed in Canada;

b. the time scheduling of the delivery of the industrial benefits;

c. the achievement of a satisfactory level of liquidated damages in the event the Contractor fails to perform his obligations;

d. the regional distribution to be achieved; and

e. the contribution to a life-cycle support capability for the NFA in Canadian industry.

4. The New Fighter Aircraft Industrial Benefits Program has, from its inception in 1977, been designed to provide opportunities for economic activity in all industrial sectors and regions of Canada, over a period of time, extending well beyond the timeframe of the delivery of the aircraft to the Canadian Armed Forces. Since the aircraft are being bought "off the shelf" in order to minimize cost and the wait prior to delivery and since the supplier network for both the General Dynamics (GD) F-16 and the McDonnell-Douglas (MDC) F-18A has, for some time, been established in the United States industry, it follows that the opportunities for Canada to compete and participate in the current development and production program are severely limited. Nevertheless, both competitors, and their suppliers, have been able to offer to Canada some portions of the structure, engine, and sub-systems which Canadian companies are expected to be able to produce at competitive prices for the duration of the respective program. The great majority of the industrial benefits are, however, not work on the F-16 or the F-18A at all, but rather, consist of purchases of aerospace and non-aerospace goods and services, investments in new Canadian facilities, the transfer of advanced technology to Canadian firms, export marketing assistance for Canadian products (and the promotion of tourism to Canada in the MDC offer only). While the contracts negotiated with both firms stress the placement of industrial benefits in the aerospace and electronics sectors of Canadian industry -- which are key elements in the country's future economic growth -- the diversity of the industrial benefits program which have been proposed offers long-term opportunities to a broad spectrum of Canadian industry to participate in the NFA industrial benefits program.

5. In order to ensure consistency of approach and uniformity of treatment of both contenders, ground rules were laid down at the beginning of the program regarding what types of activities would, or would not, be eligible for consideration under their industrial benefits offers. These are referred to collectively as "eligibility criteria", and there are numerous specific ones which apply to particular types of transactions. There are a number of basic rules which are applicable, however, to all types of transactions -- and, to be eligible as an NFA industrial benefit, a business transaction must meet the following basic criteria:

a. a benefit must be brought about by the prime Contractor, its divisions, its first-tier sub-contractors, or the United States Government, as a result of the NFA program;

b. the benefit must accrue to Canada after March 18, 1977;

c. only the Canadian content of benefits is considered eligible for credit;

d. in the case of goods and services which have been procured from Canada in the past, only increases over a baseline period will be considered as brought about by the NFA program; and

e. benefits cannot include raw materials and imported materials and services.

Industrial Benefits Offered

6. GD and MDC have offered a diversified range of industrial benefits to Canada, each totalling about $3 billion in commitments over an 18-year period. The benefits offered could consist of direct purchases; investments in Canadian manufacturing industry; technology transfers; export marketing assistance; final assembly and test in Canada (FATIC) of the Canadian Forces aircraft, and 50 to 100 of the aircraft for other customers; and, in the case of MDC only, a program to encourage tourism in Canada. A summary of the industrial benefits commitments offered in the two draft contracts is given in the table below.

Summary of Industrial Benefits Commitments

(Canadian Dollars in Year of Expenditure)

Benefits	GD	MDC
Firm Commitments	$ 3.878 B (1)(2)	$ 2.453 B
Conditional Commitments	0.022 B (3)	0.594 B (4)
Total	$ 3.899 B (2)	$ 3.047 B
Liquidated Damages		
Maximum (if 0% of commitment is achieved)	$ 189.6 M	$ 120.3 M
If only 50% of commitment is achieved	$ 40.0 M	$ 45.1 M
Distribution Plan		
Aerospace and Electronics (A&E) Sectors (minimum)	65%	60%
A&E Technology Transfer	10%	10%
A&E Advanced Program Activity	10%	
A&E Purchases	11%	
Tourism		10% (maximum)

Notes:

(1) Includes final assembly and test of CF-16 in Canada.

(2) Includes negotiated investment multiplier credits, the purpose of which is to entice the Contractor into carrying out investments of a desirable nature in certain parts of the country.

(3) Relates to the final assembly and test of 50 additional F-16 for other countries.

(4) Relates to final assembly and test of CF-18A in Canada, and up to 100 F-18A; and various other components of the CF/F-18A. Conditions relate to the competitiveness of Canadian production, which entails "premium" costs in some cases.

7. It is important to note that the offers are not "fixed" as to specific regions, particular projects, or "guaranteed" line items. The Commitments are to total dollar amounts, by time period, compartmentalized into desired categories of activities (as per the Distribution Plan), and backed by liquidated damages. Industrial benefits periods run to 1993 (GD), and 1995 (MDC). Although neither Contractor has taken a commitment to specific "work packages", with the exception of FATIC of the Canadian Forces aircraft which is an option open to the Canadian Government, a considerable number of highly probable activities were defined in some detail by each contender, and these were used as the basis for the overall evaluation process (both qualitative and quantitative), and for the calculation of anticipated distribution of these industrial benefits as shown below -- this distribution by type of activity is provided in greater detail for information purposes in the negotiated agreements.

Anticipated Distribution of Industrial Benefits
(Canadian Dollars in Year of Expenditure)

General Dynamics		McDonnell Douglas	
CF/F-16 FATIC	$ 64 M	CF/F-18 FATIC	$ 137 M
Purchases	611 M	Advanced Program Activity and Technology Transfer (A&E)	150 M
Investments and resulting sales (including investment multipliers)	2,713 M*	Purchases (may be replaced by investments, technology transfer, export marketing assistance, tourism, within the Distribution Plan)	2,760 M
Export Marketing Assistance	512 M		
	$ 3,899 M		$ 3,047 M

* Note: includes investment multipliers (incentive "bonuses") which have been negotiated into the contract.

Analysis and Evaluation of Industrial Benefits - Macro Approach

8. The industrial benefits were evaluated using criteria which took into consideration the dollar amount (face value) of the benefits; qualitative factors such as technology enhancement, economic impact, regional impact, and the contribution to a life-cycle support capability for the NFA; and risk. This was done on the basis of both known and probable plans of the companies, and on the basis of achievement of the contracted Distribution Plan. The evaluation results, expressed as a Composite Score, are the basic dollar value adjusted for "quality" and risk, and represent therefore the total worth or "utility" of each of the two packages to Canada, in the context of our current Governmental objectives.

9. On an overall "macro" basis, the contractual obligations entered into by the two Contractors were evaluated as below:

	Composite Scores (NOT RECALCULATED)	
	GD	MDC
Firm plus Conditional as per most probable plans (FATIC included)	2,572	3,146
Firm plus Conditional as per most probable plans (FATIC not included)	2,543	3,085
Firm plus Conditional as per Distribution Plan (1) (FATIC not included)	2,693	2,966
Firm Only as per most probable plans (FATIC not included)	2,543	2,673
Firm Only as per Distribution Plan (FATIC not included)	2,693	2,500

Does not include last-minute changes to the two offers.

Note:

(1) The Distribution Plan is the commitment to apportion certain benefits to the Aerospace and Electronics sectors, and to certain types of activities within these sectors.

10. Under both major alternative scenarios, namely "Firm plus Conditional with FATIC not included", and "Firm only with FATIC not included", the MDC offer evaluated on the basis of its most probable activities is clearly superior to the GD offer in the first case, and slightly superior to the GD offer in the second case -- specifically, MDC 3,085 vs GD 2,543, and MDC 2,673 vs GD 2,543 respectively.

11. A qualitative evaluation of the two offers was also made from the aspects of impact on industrial sectors, and risk. The two proposals were comparatively evaluated as follows:

	CF-16	EQUAL	CF-18A
Aircraft Sub-Sector			**
Aerospace Sub-Systems	**		
Electronics			**
Other Industry Sectors		X	
Advanced Technology		X	
FATIC		X	
Risk			*

Note:
* = Marginal Advantage
** = Significant Advantage

12. When looked at in their entirety, from the perspectives of quantity, quality, technology transfer, technological advancement opportunities, regional distribution, and risk, the two industrial benefits packages were both considered acceptable -- the MDC package was, however, judged to be the superior of the two.

Analysis and Evaluation of Industrial Benefits - Micro Approach

13. As a cross-check on the evaluation results falling out of the macro-analytical approach (Paragraphs 8 to 12 above), the industrial benefits were also evaluated on a micro-analytical (or "bottom-up") approach, using for that purpose our detailed knowledge of the particular activities which each of the competitors was already doing, or planning to do, in Canada as a whole, and in each of its regions in particular. It is important to note the fact that the two draft contracts which have been negotiated are not identical in the insofar as their terms and conditions are concerned, particularly in the investments area where the GD contract contains explicitly stated investment multipliers (incentive "bonuses" to entice the Contractor to do things of interest to us in desirable locations), whereas the MDC contract only has a basic statement of principle in this regard, without having these "bonuses" explicitly laid out. Because of this fact, the micro-analysis was done using three different evaluation bases, in order to provide further internal cross-checking and validation:

a. Sales/Purchase Value Basis: this technique focussed only on the output to be derived from an investment facility, and on the value of any purchases, on the grounds that it is these factors which most closely reflect the real economic impact of a given activity (which in turn creates jobs). The basic value of investments is not counted, since the great bulk of advanced machinery and equipment will likely be imported; the residual amount, namely the actual building construction costs, are very small in relation to total investment cost, and create but a temporary economic impact -- they have therefore been ignored. Similarly, the investment multipliers have been omitted, since they are but an accounting entry on the ledger books for the contract. In our view, this evaluation basis is that which deserves greatest prominence, since it not only closely reflects real economic impact, but is also that to which people can most readily relate (sales equals jobs).

b. Composite Score Basis: this technique is the same as that employed for the macro-analysis (Paragraphs 8 and 9 above), which takes into consideration the dollar amount (face value) of a transaction; qualitative factors such as technology enhancement, economic impact, regional impact, and the contribution to a life-cycle support capability for the NFA; and risk. The approach was applied to each specific activity which had been identified by the two Contractors to date. Since a great number of considerations went into the assignment of a "value" to each of the above factors, and since several of the factors are in a sense contradictory (representing as they do partially or totally conflicting Government objectives), the composite score is the closest we can get to a measure of the real worth of a given activity to Canada. It must be recognized, however, that although it is an excellent analytical tool, it has limitations insofar as public usage is concerned, due to its complexity.

c. Investment/Investment Multipliers/Sales/Purchase Value Basis: this technique focussed essentially on the "credits" which the Contractor would obtain towards the extinguishing of his obligation to Canada, using the investment multipliers which were explicitly negotiated in the GD contract (covering such factors as the industrial sector in which the investment is to be made, location, technological advancement, Canadian ownership, and continuing research and development). Given the assurance of such a framework in contractual terms, GD was able to make its own estimates of the "credits" likely to flow from a given investment, and make consequent adjustments to the face value of its total commitment, increasing the latter to take these multipliers into account. In the MDC contract, on the other hand, although the principle of additional "credits" for desirable investment activities in particular locations has been contractually recognized, actual values for the investment multipliers have not been explicitly laid out -- they remain to be negotiated on a case-by-case basis, which from our point of view, is more desirable, since it allows us to take different stances at various points in time in response to changing economic circumstances. Since it is not yet known what the likely additional "credits" would be for any given investment, MDC did not include an estimation of these in the face value of its total commitment. To make the two situations comparable, both offers were evaluated using the investment multipliers which are in the GD contract (on the assumption that we would probably end up in that vicinity in our case-by-case negotiations with MDC on each of its proposed investments).

14. Before proceeding with the analysis, and the results thereof, it is useful to recall the main elements of each of the two offers -- these are set out on the two following pages, showing the investment, investment multipliers, and sales figures:

General Dynamics
($ millions)

Investments	
. Numerical Control Machining Centre	I-14, M-70, S-76
. Aerospace Forging Facility	I-40, M-200, S-300
. Vacuum Casting Facility	I-25, M-150, S-285
. Engine Components Manufacturing Centre	I-25, M-125, S-260
. Aircraft Power Supply Manufacturing	I-5, M-20, S-169
. Isostatic Press Facility (1)	I-35, M-175, S-405
Purchases	611
. No major identifiable items	
Export Marketing Assistance	512
Total:	I-144, M-740, S-2618

Notes:

(1) Isostatic Press Facility - GD sales forecast of $810 M (from full plant operation in 1984 to May 1993 ($65/M/yr. '84 $ - $48 M/yr.'80$) - based on forecast employment level of 250-300, represents output of about $175,000/employee/year, which is totally out of line with industry norms -- for highly automated operation, 85-90,000/yr./employee is considered reasonable, and on that basis, GD sales figure adjusted to $405 M, considered to be a more realistic figure. On this basis, strong likelihood (if our view holds) that GD would not be able to discharge its total obligation to Canada.

(2) FATIC has been omitted from the analysis, in line with our assessment of its relative unattractiveness as an industrial benefit to Canada.

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McDonnell Douglas
($ millions)

Investments	
. Blade and Vane Facility	I-60, M-300, S-420
. Numerical Control Machining Centre	I-4, M-20, S-225
. Advanced Composites Components Manufacturing	I-2, M-10, S-100
. Advanced Plastic Mold Manufacturing . Heat Pump Components Manufacturing . Electrical and Broadcast Equipment . Glass Manufacturing Facility	I-4, M-20, S-200
Purchases (1)	
. DC-9-80/DC-10-Stretch/KC-10 Components	645
. DC-9/DC-10 Components (Work Spread)	200
. Avionics Equipment	572
. CF/F-18A Structural Assemblies	291
. Other (Various)	460
Advanced Program Activity	150
Technology Transfer (2)	No assigned value
Export Marketing Assistance (2)	No assigned value
Tourism Development (2)	No assigned value
Total:	I-70, M-350, S-3263

Notes:

(1) FATIC has been omitted from the analysis, in line with our assessment of its relative unattractiveness as an industrial benefit to Canada.

(2) No value has been assigned to the Technology Transfer, Export Marketing Assistance, and Tourism Development elements of the MDC package, even though MDC intends to establish and proceed with these if they are successful in the NFA competition. These elements thus provide a degree of redundancy in the event other work packages should fall short of expectations -- and an extra bonus to Canada otherwise.

15. These industrial benefits were assessed in terms of their likely impact upon Québec, Ontario, and the rest of Canada, using the three evaluation bases described earlier. The resulting "regional distribution" of industrial benefits, is the result of a subjective analysis of the commitments contained in the General Dynamics and McDonnell Douglas industrial benefit contracts done in the light of a detailed knowledge of the many industrial benefit activities which the primes and their suppliers have been pursuing in conjunction with Canadian companies and provincial agencies.

a. Benefits identified as "ALLOCATED" include two types:

(1) Those which have been placed with Canadian companies since the start of the NFA industrial benefits program in March 1977; and

(2) those which have progressed to the stage where a Canadian supplier, partner, licencee, or location for an investment has been selected, and the placing of the benefit is understood to be solely dependent on the choice of either the CF-16 or CF-18A.

It is important to note that the total eventual value of these benefits is predicated on assumptions regarding the markets which can be addressed and the likely level of resulting sales over the life of the NFA contract.

b. The "BEST GUESS" levels are the "ALLOCATED" benefits plus an assumed placement or sharing of the remaining benefits which the contractors are known to be contemplating, taking into consideration such factors as the capabilities of Canadian companies, the technology levels involved, traditional customer/supplier relationships, and the objectives of Government and industry organizations concerning the future development of industry in Canada.

c. The "MOST OPTIMISTIC" and "MOST PESSIMISTIC" estimates are based on a redistribution of some of the unallocated benefits included in the "BEST GUESS". Since the "BEST GUESS" is by nature highly subjective, those benefits which could reasonably be assumed to be suitable, either in whole or in part, for other regions were displaced to second choice areas in order to arrive at the "MOST OPTIMISTIC" and "MOST PESSIMISTIC" estimates.

16. The detailed analyses flowing from this process are attached as Annexes "B", "C", and "D" for the Sales/Purchase Value Basis, the Composite Score Basis, and the Investments/Investment Multipliers/ Sales/Purchase Value Basis respectively. In each of these Annexes, the material is presented as follows:

a. Page 1 - Summary Sheet
b. Page 2 - GD - Québec
c. Page 3 - GD - Ontario
d. Page 4 - GD - Rest of Canada
e. Page 5 - MDC - Québec
f. Page 6 - MDC - Ontario
g. Page 7 - MDC - Rest of Canada

17. A comparative analysis of the different results for each of the regions of Canada is given as Annex "A". Since all of the results are well-presented and readily understandable in the Annex, they will not be repeated here. The material is presented as follows:

a. Page 1 - Overall Comperative Analysis - Best Guess Estimates
b. Page 2 - Comperative Analysis - Québec
c. Page 3 - Comperative Analysis - Ontario
d. Page 4 - Comparative Analysis - Rest of Canada

18. Focussing briefly on the Sales/Purchase Value Basis, as being the most readily understandable by all people in terms of economic impact, the side-by-side comparisons of the two offers ("Best Guess" estimates) is as follows:

($ millions)

	GD	MDC	
Québec	1,472	1,573	48.2%
Ontario	663	1,296	39.7
Rest of Canada	483	394	12.1
Total for Canada	2,618	3,263	

19. It is readily apparent from an examination of the above, particularly the comparative analyses contained in Annex "A", that the 3 micro-analytical evaluative approaches yield internally-consistent results, i.e. the indicated result or preference is the same regardless of which evaluation basis is employed. It goes without saying that one cannot compare the results obtained for one offer using a particular evaluation technique, with the results obtained for the other offer using a different evaluation technique -- such comparisons are by definition meaningless.

CONCLUSIONS

20. The micro-analysis results can be summarized as follows:

a. For Québec	- slightly greater "Best Guess" (most probable) benefits from the MDC package - slightly greater potential from the MDC package - MDC slightly superior to GD
b. For Ontario	- far greater "Best Guess" (most probable) benefits from the MDC package - far greater potential from the MDC package - MDC greatly superior to GD
c. For the Rest of Canada	- greater "Best Guess" (most probable) benefits from the GD package - slightly greater potential from GD packages - GD slightly superior to MDC
d. Overall (All of Canada)	- far greater "Best Guess" (most probable) benefits from the MDC package - far greater potential from the MDC package (because of redundancies) - MDC clearly superior to GD

21. These micro-results are entirely consistent with the quantitative and qualitative analysis done on a macro-basis, as described in Paragraphs 8 to 12 above.

22. The final conclusion is that, when looked at from the perspectives of quantity, quality, technology transfer, technological advancement opportunities, regional distribution, and risk, the MDC industrial benefits package is clearly the superior of the two, and represents thus the best deal for Canada as a whole, and for its various regions.

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ASSESSMENT OF REGIONAL DISTRIBUTION OF NFA INDUSTRIAL BENEFITS

COMPARATIVE ANALYSIS

BEST GUESS ESTIMATE

	QUEBEC		ONTARIO		REST OF CANADA	
	GD	MDC	GD	MDC	GD	MDC
Sales/Purchase Value Basis ($ millions)	1,472	1,573	663	1,296	483	394
Composite Score Basis (score)	1,923	2,168	703	1,427	635	511
Investment/Investment Multiplier/Sales/ Purchase Value Basis ($ millions)	2,156	1,981	688	1,308	658	394

Note:

1. Total Best Guess Estimate for all of Canada, using Sales/Purchase Value method is:

   a. GD $ 2,618 million
   b. MDC $ 3,263 million

ASSESSMENT OF REGIONAL DISTRIBUTION OF NFA INDUSTRIAL BENEFITS

COMPARATIVE ANALYSIS

QUEBEC ONLY

	SALES/PURCHASE VALUE BASIS ($ millions)		COMPOSITE SCORE BASIS (Score)		INVESTMENT/INVESTMENT MULTIPLIER/SALES/ PURCHASE VALUE BASIS ($ millions)	
	GD	MDC	GD	MDC	GD	MDC
Allocated (contracted or identified)	1,101	889	1,586	1,301	1,785	1,285
Most Pessimistic Estimate (over contract life)	1,301	1,416	1,765	1,975	1,985	1,824
Best Guess Estimate	1,472	1,573	1,923	2,168	2,156	1,981
Most Optimistic Estimate	1,634	1,860	2,074	2,535	2,318	2,274

ASSESSMENT OF REGIONAL DISTRIBUTION OF NFA INDUSTRIAL BENEFITS

COMPARATIVE ANALYSIS

ONTARIO ONLY

	SALES/PURCHASE VALUE BASIS ($ millions)		COMPOSITE SCORE BASIS (Score)		INVESTMENT/INVESTMENT MULTIPLIER/SALES/ PURCHASE VALUE BASIS ($ millions)	
	GD	MDC	GD	MDC	GD	MDC
Allocated (contracted or identified)	230	436	297	519	255	436
Most Pessimistic Estimate (over contract life)	471	643	515	733	496	649
Best Guess Estimate	663	1,296	703	1,427	688	1,308
Most Optimistic Estimate	869	1,449	905	1,590	894	1,461

ASSESSMENT OF REGIONAL DISTRIBUTION OF NFA INDUSTRIAL BENEFITS

COMPARATIVE ANALYSIS

REST OF CANADA (OTHER THAN QUEBEC AND ONTARIO) ONLY

	SALES/PURCHASE VALUE BASIS ($ millions)		COMPOSITE SCORE BASIS (Score)		INVESTMENT/INVESTMENT MULTIPLIER/SALES/ PURCHASE VALUE BASIS ($ millions)	
	GD	MDC	GD	MDC	GD	MDC
Allocated (contracted or identified)	334	235	502	305	509	235
Most Pessimistic Estimate (over contract life)	436	305	594	393	611	305
Best Guess Estimate	483	394	635	511	658	394
Most Optimistic Estimate	526	498	672	633	701	505

ASSESSMENT OF REGIONAL DISTRIBUTION OF INDUSTRIAL BENEFITS

SALES/PURCHASE VALUE BASIS

($ millions)

	QUEBEC		ONTARIO		REST OF CANADA	
	GD	MDC	GD	MDC	GD	MDC
Allocated (contracted or identified)	1,101	889	230	436	334	235
Most Pessimistic Estimate (over contract life)	1,301	1,416	471	643	436	305
Best Guess Estimate (1) (most probable)	1,472	1,573	663	1,296	483	394
Most Optimistic Estimate	1,634	1,860	869	1,449	526	498

Notes:

1. Total Best Guess Estimate for all of Canada is:

   a. GD - $2,618 million
   b. MDC - $3,263

ASSESSMENT OF NFA INDUSTRIAL BENEFITS WHICH QUEBEC MAY OBTAIN GENERAL DYNAMICS

SALES/PURCHASE VALUE BASIS

ALLOCATED (CONTRACTED OR IDENTIFIED)	VALUE
Aerospace Forging Facility	$ 300 M
Isostatic Press Facility	405
Engine Component Manufacturing Centre	260
Numerical Control Maching Centre	76
Purchases:	
. Helicopter Instrument Displays	38
. F-100 Engine Assembly and Test	12
. CF-16 Landing Gear	9
. CF-16 Castings (Various)	1
Total - Allocated	$ 1,101 M

POTENTIAL	Most Pessimistic Estimate	Best Guess Estimate	Most Optimistic Estimate
Allocated (Total from above)	$1,101 M	$ 1,101 M	$1,101 M
Purchases:			
. Casting and Machined Parts	40	70	100
. CF-16 Inertial Navigation Components	0	11	23
. CF/F16 Continuous Waveguide Illuminator	0	5	10
. Data Processing Equipment	0	50	100
. Other (unidentified)	35	55	75
Export Marketing Assistance	125	180	225
TOTAL - ALLOCATED & POTENTIAL	$1,301 M	$ 1,472 M	$1,634 M

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ASSESSMENT OF NFA INDUSTRIAL BENEFITS WHICH ONTARIO MAY OBTAIN GENERAL DYNAMICS

SALES/PURCHASE VALUE BASIS

ALLOCATED (CONTRACTED OR IDENTIFIED)	VALUE
Power Supply Design/Manufacturing	$ 169 M
Purchases:	
. CF/F-16 Radar Displays	25
. CF/F Identification Friend/Foe	3
. CF/F-16 Air Data Computer	7
. CF/F-16 Structural Components	20
. CF/F-16 Other Components	6
Total - Allocated	$ 230 M

POTENTIAL	Most Pessimistic Estimate	Best Guess Estimate	Most Optimistic Estimate
Allocated (Total from above)	$ 230 M	$ 230 M	$ 230 M
Purchases			
. Casting and Machined Parts	30	60	90
. CF/F-16 Inertial Navigation Components	0	12	23
. CF/F-16 Continuous Wave Illuminator	0	5	10
. Gun System Components	0	35	70
. F-16 Advanced Cockpit Display Components	0	15	30
. Electronic Display Tubes	0	20	40
. Other (unidentified)	36	56	76
Export Marketing Assistance	175	230	300
TOTAL - ALLOCATED & POTENTIAL	$ 471 M	$ 663 M	$ 869 M

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ASSESSMENT OF NFA INDUSTRIAL BENEFITS
WHICH CANADA OTHER THAN QUEBEC AND ONTARIO MAY OBTAIN
GENERAL DYNAMICS

SALES/PURCHASE VALUE BASIS

ALLOCATED (CONTRACTED OR IDENTIFIED)	VALUE
Vacuum Casting Facility	$ 285 M
Purchases:	
. Electronic/Electro Mechanical Components	25
. CF-16 Wiring Harness	10
. CF-16 Fire Control Computer Components	2
. CF-16 Structural Components	2
. Miscellaneous Other	10
Total - Allocated	$ 334 M

POTENTIAL	Most Pessimistic Estimate	Best Guess Estimate	Most Optimistic Estimate
Allocated (Total from above)	$ 334 M	$ 334 M	$ 334 M
Purchases:			
. CF-16 External Fuel Tanks	2	2	2
. Other (unidentified)	25	45	65
Export Marketing Assistance	75	102	125
TOTAL - ALLOCATED & POTENTIAL	$ 436 M	$ 483 M	$ 526 M

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ASSESSMENT OF NFA INDUSTRIAL BENEFITS WHICH QUEBEC MAY OBTAIN McDONNELL DOUGLAS

SALES/PURCHASE VALUE BASIS

ALLOCATED (CONTRACTED OR IDENTIFIED)	VALUE
CGE Blade and Vane Facility	$ 420 M
Numerical Control Machining Centre	225
Advanced Composites Components Manufacturing	100
Purchases:	
. CF/F-18A Radar Data Processor	34
. CF/F-18A Hydraulic System Components	31
. Electronics Components	38
. GE/CGE Corporate	41
Total - Allocated	$ 889 M

POTENTIAL	Most Pessimistic Estimate	Best Guess Estimate	Most Optimistic Estimate
Allocated (Total from above)	$ 889 M	$ 889 M	$ 889 M
GE Investment/Manufacturing eg. Advanced Plastic Mold Mfg. Heat Pump Component; Glass Mfg.	100	111	150
Purchases:			
. DC-9/DC-10/KC-10 Work	60	115	170
. Avionics Equipment	30	57	105
. CF/F-18A Structural Assemblies	248	248	291
. Advanced Program Activity	50	85	125
. CF/F-18A Electronic Components	0	11	23
. GE Armament & Control Group	25	35	60
. GE/CGE Corporate (additional)	14	18	39
. F-404 Engine Assembly & Test	0	4	8
TOTAL - ALLOCATED & POTENTIAL	$1,416 M	$1,573 M	$1,860 M

DITC/NFA/PO
10 April 1980

ASSESSMENT OF NFA INDUSTRIAL BENEFITS WHICH ONTARIO MAY OBTAIN McDONNELL DOUGLAS

SALES/PURCHASE VALUE BASIS

ALLOCATED (CONTRACTED OR IDENTIFIED)	VALUE
Purchases:	
. DC-9/DC-10/KC-10 Work	$ 350 M
. GE Engine Components	35
. Garrett Control Systems	33
. CF/F-18A Inertial Navigation System	15
. Avionics Equipment	3
Total - Allocated	$ 436 M

POTENTIAL	Most Pessimistic Estimate	Best Guess Estimate	Most Optimistic Estimate
Allocated (Total from above)	$ 436 M	$ 436 M	$ 436 M
GE Investments/Manufacturing: Electrical & Broadcast Equipment	50	89	100
Purchases:			
. DC-9/DC-10/KC-10 Work (additional)	50	106	160
. Avionics Equipment (addidional)	2	512	522
. GE/CGE Corporate	40	52	60
. CF/F-18A Electronic Components	0	12	23
. GE Armament & Control Group	25	35	60
. F-404 Engine Assembly & Test	0	4	8
. Advanced Program Activity	40	50	80
TOTAL - ALLOCATED & POTENTIAL	$ 643 M	$ 1,296 M	$ 1,449 M

DITC/NFA/PO
10 April 1980

ASSESSMENT OF NFA INDUSTRIAL BENEFITS
WHICH CANADA OTHER THAN QUEBEC AND ONTARIO MAY OBTAIN
McDONNELL DOUGLAS
SALES/PURCHASE VALUE BASIS

ALLOCATED (CONTRACTED OR IDENTIFIED)	VALUE
Purchases:	
. DC-9/DC-10 Work Spread	$ 200 M
. Engine Components	35
Total - Allocated	$ 235 M

POTENTIAL	Most Pessimistic Estimate	Best Guess Estimate	Most Optimistic Estimate
Allocated (Total from above)	$ 235 M	$ 235 M	$ 235 M
GE Investment/Manufacturing eg. Glass Manufacturing	0	0	50
Purchases:			
. DC-9/DC-10/KC-10 Work	40	74	100
. CF/F-18 Structural Assemblies	0	43	43
. GE Armament & Control Group	0	8	15
. GE/CGE Corporate	15	19	25
. Advanced Program Activity	15	15	30
TOTAL - ALLOCATED & POTENTIAL	$ 305 M	$ 394 M	498 M

DITC/NFA/PO
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ASSESSMENT OF REGIONAL DISTRIBUTION OF NFA INDUSTRIAL BENEFITS

COMPOSITE SCORE BASIS

(SCORE)

	QUEBEC		ONTARIO		REST OF CANADA	
	GD	MDC	GD	MDC	GD	MDC
Allocated (contracted or identified)	1,586	1,301	297	519	502	305
Most Pessimistic Estimate (over contract life)	1,765	1,975	515	733	594	393
Best Guess Estimate (1) (most probable)	1,923	2,168	703	1,427	635	511
Most Optimistic Estimate	2,074	2,535	905	1,590	672	633

Notes:

1. Total Best Guess Estimate for all of Canada is:

   a. GD - 3,261
   b. MDC - 4,106

ASSESSMENT OF NFA INDUSTRIAL BENEFITS WHICH QUEBEC MAY OBTAIN GENERAL DYNAMICS

COMPOSITE SCORE BASIS

ALLOCATED (CONTRACTED OR IDENTIFIED)	SCORE
Aerospace Forging Facility	353
Isostatic Press Facility	647
Engine Component Manufacturing Centre	414
Numerical Control Machining Centre	110
Purchases:	
. Helicopter Instrument Displays	42
. F-100 Engine Assembly and Test	11
. CF-16 Landing Gear	8
. CF-16 Castings (Various)	1
Total - Allocated	1,586

POTENTIAL	Most Pessimistic Estimate	Best Guess Estimate	Most Optimistic Estimate
Allocated (Total from above)	1,586	1,586	1,586
Purchases:			
. Casting and Machined Parts	35	61	87
. CF-16 Inertial Navigation Components	0	13	27
. CF/F16 Continuous Waveguide Illuminator	0	6	12
. Data Processing Equipment	0	46	93
. Other (unidentified)	28	44	60
Export Marketing Assistance	116	167	209
TOTAL - ALLOCATED & POTENTIAL	1,765	1,923	2,074

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ASSESSMENT OF NFA INDUSTRIAL BENEFITS WHICH ONTARIO MAY OBTAIN GENERAL DYNAMICS

COMPOSITE SCORE BASIS

ALLOCATED (CONTRACTED OR IDENTIFIED)	SCORE
Power Supply Design/Manufacturing	232
Purchases:	
. CF/F-16 Radar Displays	30
. CF/F Identification Friend/Foe	3
. CF/F-16 Air Data Computer	8
. CF/F-16 Structural Components	19
. CF/F-16 Other Components	5
Total - Allocated	297

POTENTIAL	Most Pessimistic Estimate	Best Guess Estimate	Most Optimistic Estimate
Allocated (Total from above)	297	297	297
Purchases			
. Casting and Machined Parts	26	52	78
. CF/F-16 Inertial Navigation Components	0	14	28
. CF/F-16 Continuous Wave Illuminator	0	6	12
. Gun System Components	0	35	70
. F-16 Advanced Cockpit Display Components	0	18	36
. Electronic Display Tubes	0	22	44
. Other (unidentified)	29	45	61
Export Marketing Assistance	163	214	279
TOTAL - ALLOCATED & POTENTIAL	515	703	905

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ASSESSMENT OF NFA INDUSTRIAL BENEFITS WHICH CANADA OTHER THAN QUEBEC AND ONTARIO MAY OBTAIN GENERAL DYNAMICS

COMPOSITE SCORE BASIS

ALLOCATED (CONTRACTED OR IDENTIFIED)	SCORE
Vacuum Casting Facility	451
Purchases:	
. Electronic/Electro Mechanical Components	25
. CF-16 Wiring Harness	14
. CF-16 Fire Control Computer Components	2
. CF-16 Structural Components	2
. Miscellaneous Other	8
Total - Allocated	502

POTENTIAL	Most Pessimistic Estimate	Best Guess Estimate	Most Optimistic Estimate
Allocated (Total from above)	502	502	502
Purchases:			
. CF-16 External Fuel Tanks	2	2	2
. Other (unidentified)	20	36	52
Export Marketing Assistance	70	95	116
TOTAL - ALLOCATED & POTENTIAL	594	635	672

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ASSESSMENT OF NFA INDUSTRIAL BENEFITS WHICH QUEBEC MAY OBTAIN McDONNELL DOUGLAS

COMPOSITE SCORE BASIS

ALLOCATED (CONTRACTED OR IDENTIFIED)	SCORE
CGE Blade and Vane Facility	706
Numerical Control Machining Centre	321
Advanced Composites Components Manufacturing	151
Purchases:	
. CF/F-18A Radar Data Processor	41
. CF/F-18A Hydraulic System Components	13
. Electronics Components	31
. GE/CGE Corporate	38
Total - Allocated	1,301

POTENTIAL	Most Pessimistic Estimate	Best Guess Estimate	Most Optimistic Estimate
Allocated (Total from above)	1,301	1,301	1,301
GE Investment/Manufacturing eg. Advanced Plastic Mold Mfg. Heat Pump Component; Glass Mfg.	110	122	165
Purchases:			
. DC-9/DC-10/KC-10 Work	72	138	204
. Avionics Equipment	36	68	126
. CF/F-18A Structural Assemblies	347	347	428
. Advanced Program Activity	73	125	184
. CF/F-18A Electronic Components	0	13	27
. GE Armament & Control Group	23	33	56
. GE/CGE Corporate (additional)	13	17	36
. F-404 Engine Assembly & Test	0	4	8
TOTAL - ALLOCATED & POTENTIAL	1,975	2,168	2,535

DITC/NFA/PO
10 April 1980

ASSESSMENT OF NFA INDUSTRIAL BENEFITS WHICH ONTARIO MAY OBTAIN McDONNELL DOUGLAS

COMPOSITE SCORE BASIS

ALLOCATED (CONTRACTED OR IDENTIFIED)	SCORE
Purchases:	
. DC-9/DC-10/KC-10 Work	420
. GE Engine Components	51
. Garrett Control Systems	33
. CF/F-18A Inertial Navigation System	12
. Avionics Equipment	3
Total - Allocated	519

POTENTIAL	Most Pessimistic Estimate	Best Guess Estimate	Most Optimistic Estimate
Allocated (Total from above)	519	519	519
GE Investments/Manufacturing: Electrical & Broadcast Equipment	46	83	93
Purchases:			
. DC-9/DC-10/KC-10 Work (additional)	60	127	192
. Avionics Equipment (addidional)	2	548	558
. GE/CGE Corporate	35	45	52
. CF/F-18A Electronic Components	0	8	16
. GE Armament & Control Group	23	33	56
. F-404 Engine Assembly & Test	0	4	8
. Advanced Program Activity	48	60	96
TOTAL - ALLOCATED & POTENTIAL	733	1,427	1,590

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ASSESSMENT OF NFA INDUSTRIAL BENEFITS WHICH CANADA OTHER THAN QUEBEC AND ONTARIO MAY OBTAIN McDONNELL DOUGLAS

COMPOSITE SCORE BASIS

ALLOCATED (CONTRACTED OR IDENTIFIED)	SCORE
Purchases:	
. DC-9/DC-10 Work Spread	254
. Engine Components	51
Total - Allocated	305

POTENTIAL	Most Pessimistic Estimate	Best Guess Estimate	Most Optimistic Estimate
Allocated (Total from above)	305	305	305
GE Investment/Manufacturing eg. Glass Manufacturing	0	0	55
Purchases:			
. DC-9/DC-10/KC-10 Work	51	94	127
. CF/F-18 Structural Assemblies	0	63	63
. GE Armament & Control Group	0	8	14
. GE/CGE Corporate	15	19	25
. Advanced Program Activity	22	22	44
TOTAL - ALLOCATED & POTENTIAL	393	511	633

DITC/NFA/PO
10 April 1980

ASSESSMENT OF REGIONAL DISTRIBUTION OF NFA INDUSTRIAL BENEFITS

INVESTMENTS/INVESTMENT MULTIPLIERS/SALES/PURCHASE VALUE BASIS

($ millions)

	QUEBEC		ONTARIO		REST OF CANADA	
	GD	MDC	GD	MDC	GD	MDC
Allocated (contracted or identified)	1,785	1,285	255	436	509	235
Most Pessimistic Estimate (over contract life)	1,985	1,824	496	649	611	305
Best Guess Estimate (1) (most probable)	2,156	1,981	688	1,308	658	394
Most Optimistic Estimate	2,318	2,274	894	1,461	701	505

Notes:

1. Total Best Guess Estimate for all of Canada is:

   a. GD - 3,502 million (I 144, M 740, S 2618)
   b. MDC - 3,683 million (I 70, M 350, S 3263)

ASSESSMENT OF NFA INDUSTRIAL BENEFITS WHICH QUEBEC MAY OBTAIN GENERAL DYNAMICS

INVESTMENTS/INVESTMENT MULTIPLIERS/SALES/PURCHASE VALUE BASIS

ALLOCATED (CONTRACTED OR IDENTIFIED)	VALUE
Aerospace Forging Facility (I 40, M 200, S 300)	$ 540 M
Engine Component Manufacturing Centre (I 25, M 125, S 260)	410
Numerical Control Machining Centre (I 14, M 70, S 76)	160
Isostatic Press Facility (I 35, M 175, S 405)	615
Purchases:	
. Helicopter Instrument Displays	38
. F-100 Engine Assembly and Test	12
. CF-16 Landing Gear	9
. CF-16 Castings (Various)	1
Total - Allocated	$ 1,785 M

POTENTIAL	Most Pessimistic Estimate	Best Guess Estimate	Most Optimistic Estimate
Allocated (Total from above)	$1,785 M	$ 1,785 M	$1,785 M
Purchases:			
. Casting and Machined Parts	40	70	100
. CF-16 Inertial Navigation Components	0	11	23
. CF/F16 Continuous Waveguide Illuminator	0	5	10
. Data Processing Equipment	0	50	100
. Other (unidentified)	35	55	75
Export Marketing Assistance	125	180	225
TOTAL - ALLOCATED & POTENTIAL	$1,985 M	$ 2,156 M	$2,318 M

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ASSESSMENT OF NFA INDUSTRIAL BENEFITS WHICH ONTARIO MAY OBTAIN GENERAL DYNAMICS

INVESTMENTS/INVESTMENT MULTIPLIERS/SALES/PURCHASE VALUE BASIS

ALLOCATED (CONTRACTED OR IDENTIFIED)	VALUE
Power Supply Design/Manufacturing (I 5, M 20, S 169)	$ 194 M
Purchases:	
. CF/F-16 Radar Displays	25
. CF/F Identification Friend/Foe	3
. CF/F-16 Air Data Computer	7
. CF/F-16 Structural Components	20
. CF/F-16 Other Components	6
Total - Allocated	$ 255 M

POTENTIAL	Most Pessimistic Estimate	Best Guess Estimate	Most Optimistic Estimate
Allocated (Total from above)	$ 255 M	$ 255 M	$ 255 M
Purchases			
. Casting and Machined Parts	30	60	90
. CF/F-16 Inertial Navigation Components	0	12	23
. CF/F-16 Continuous Wave Illuminator	0	5	10
. Gun System Components	0	35	70
. F-16 Advanced Cockpit Display Components	0	15	30
. Electronic Display Tubes	0	20	40
. Other (unidentified)	36	56	76
Export Marketing Assistance	175	230	300
TOTAL - ALLOCATED & POTENTIAL	$ 496 M	$ 688 M	$ 894 M

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ASSESSMENT OF NFA INDUSTRIAL BENEFITS
WHICH CANADA OTHER THAN QUEBEC AND ONTARIO MAY OBTAIN
GENERAL DYNAMICS

INVESTMENTS/INVESTMENT MULTIPLIERS/SALES/PURCHASE VALUE BASIS

ALLOCATED (CONTRACTED OR IDENTIFIED)	VALUE
Vacuum Casting Facility (I 25, M 150, S 285)	$ 460 M
Purchases:	
. Electronic/Electro Mechanical Components	25
. CF-16 Wiring Harness	10
. CF-16 Fire Control Computer Components	2
. CF-16 Structural Components	2
. Miscellaneous Other	10
Total - Allocated	$ 509 M

POTENTIAL	Most Pessimistic Estimate	Best Guess Estimate	Most Optimistic Estimate
Allocated (Total from above)	$ 509 M	$ 509 M	$ 509 M
Purchases:			
. CF-16 External Fuel Tanks	2	2	2
. Other (unidentified)	25	45	65
Export Marketing Assistance	75	102	125
TOTAL - ALLOCATED & POTENTIAL	$ 611 M	$ 658 M	$ 701 M

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ASSESSMENT OF NFA INDUSTRIAL BENEFITS WHICH QUEBEC MAY OBTAIN McDONNELL DOUGLAS

INVESTMENTS/INVESTMENT MULTIPLIERS/SALES/PURCHASE VALUE BASIS

ALLOCATED (CONTRACTED OR IDENTIFIED)	VALUE
CGE Blade and Vane Facility (I 60, M 300, S 420)	$ 780 M
Numerical Control Machining Centre (I 4, M 20, S 225)	249
Advanced Composites Components Manufacturing (I 2, M 10, S 100)	112
Purchases:	
. CF/F-18A Radar Data Processor	34
. CF/F-18A Hydraulic System Components	31
. Electronics Components	38
. GE/CGE Corporate	41
Total - Allocated	$ 1,285 M

POTENTIAL	Most Pessimistic Estimate	Best Guess Estimate	Most Optimistic Estimate
Allocated (Total from above)	$1,285 M	$1,285 M	$1,285 M
GE Investment/Manufacturing eg. Advanced Plastic Mold Mfg. Heat Pump Component; Glass Mfg. (I 2/3, M 10/15)	112	123	168
Purchases:			
. DC-9/DC-10/KC-10 Work	60	115	170
. Avionics Equipment	30	57	105
. CF/F-18A Structural Assemblies	248	248	291
. Advanced Program Activity	50	85	125
. CF/F-18A Electronic Components	0	11	23
. GE Armament & Control Group	25	35	60
. GE/CGE Corporate (additional)	14	18	39
. F-404 Engine Assembly & Test	0	4	8
TOTAL - ALLOCATED & POTENTIAL	$ 1,824 M	$ 1,981 M	$2,274 M

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ASSESSMENT OF NFA INDUSTRIAL BENEFITS WHICH ONTARIO MAY OBTAIN McDONNELL DOUGLAS

INVESTMENTS/INVESTMENT MULTIPLIERS/SALES/PURCHASE VALUE BASIS

ALLOCATED (CONTRACTED OR IDENTIFIED)	VALUE
Purchases:	
. DC-9/DC-10/KC-10 Work	$ 350 M
. GE Engine Components	35
. Garrett Control Systems	33
. CF/F-18A Inertial Navigation System	15
. Avionics Equipment	3
Total - Allocated	$ 436 M

POTENTIAL	Most Pessimistic Estimate	Best Guess Estimate	Most Optimistic Estimate
Allocated (Total from above)	$ 436 M	$ 436 M	$ 436 M
GE Investments/Manufacturing: Electrical & Broadcast Equipment (I 1/2, M 5/10)	56	101	112
Purchases:			
. DC-9/DC-10/KC-10 Work (additional)	50	106	160
. Avionics Equipment (addidional)	2	512	522
. GE/CGE Corporate	40	52	60
. CF/F-18A Electronic Components	0	12	23
. GE Armament & Control Group	25	35	60
. F-404 Engine Assembly & Test	0	4	8
. Advanced Program Activity	40	50	80
TOTAL - ALLOCATED & POTENTIAL	$ 649 M	$1,308 M	$1,461 M

DITC/NFA/PO
10 April 1980

ASSESSMENT OF NFA INDUSTRIAL BENEFITS
WHICH CANADA OTHER THAN QUEBEC AND ONTARIO MAY OBTAIN
McDONNELL DOUGLAS

INVESTMENTS/INVESTMENT MULTIPLIERS/SALES/PURCHASE VALUE BASIS

ALLOCATED (CONTRACTED OR IDENTIFIED)	VALUE
Purchases:	
. DC-9/DC-10 Work Spread	$ 200 M
. Engine Components	35
Total - Allocated	$ 235 M

POTENTIAL	Most Pessimistic Estimate	Best Guess Estimate	Most Optimistic Estimate
Allocated (Total from above)	$ 235 M	$ 235 M	$ 235 M
GE Investment/Manufacturing eg. Glass Manufacturing (I 1, M 6, S 50)	0	0	57
Purchases:			
. DC-9/DC-10/KC-10 Work	40	74	100
. CF/F-18 Structural Assemblies	0	43	43
. GE Armament & Control Group	0	8	15
. GE/CGE Corporate	15	19	25
. Advanced Program Activity	15	15	30
TOTAL - ALLOCATED & POTENTIAL	$ 305 M	$ 394 M	$ 505 M

DITC/NFA/PO
10 April 1980

Government of Canada | Gouvernement du Canada

NEWS RELEASE

April 10, 1980

OTTAWA -- Defence Minister Gilles Lamontagne announced today that the McDonnell Douglas CF-18A has been selected as Canada's new fighter aircraft to replace the existing fleet of CF-104s, CF-101s and CF-5s. The announcement was made at an Ottawa news conference which was also attended by the Minister of Industry, Trade and Commerce, Herb Gray, and the Minister of Supply and Services, Jean-Jacques Blais.

Mr. Lamontagne said that "the CF-18A had been found to be better suited to Canada's diverse military requirements and that this factor had been of prime importance in the decision process."

The McDonnell Douglas Corporation's legally binding offer to the government specifies a minimum of 137 aircraft. This figure is based on the assumption that the United States does not charge Canada for certain research and development costs associated with the F-18A program. The Canadian Government has already asked the U.S. Government that these charges be waived.

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Mr. Lamontagne said that the CF-18A's twin engine configuration gives it an additional margin of safety, which is especially important in flying in Canada with its expanse of uninhabited terrain and harsh winter climate. As well, the CF-18A with its greater size is well adapted to incorporate, during its lifetime, improvements and additions to the basic aircraft. This offered more flexibility in coping with the changing strategic and tactical circumstances which Canada could experience in future years.

"In summary," said Mr. Lamontagne, "Canada has bought itself a tough, modern, safe and versatile aircraft that will be serving Canada effectively into the first years of the next century."

On the subject of industrial offsets Mr. Gray said that Canadian industry will benefit by about $2.91 billion from the purchase of the CF-18A and that "these industrial benefits will be spread across the country with at least 60 per cent going to the aerospace and electronics sector."

He said that in terms of direct employment, this means between 60,000 and 70,000 person-years of work over the life of the contract which runs to 1995.

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He added that "one of our key objectives is to provide Canadian companies with the opportunity to establish new long-term relationships with the prime contractor, and its associated companies. In order to profit from these opportunities, however, Canadian companies must nonetheless be competitive, not only amongst themselves, but against U.S. firms."

Mr. Blais, in describing the nature of the contract, said that, "all of the goals identified have been achieved. The Department of National Defence identified the number of aircraft required to fulfill our military obligations. That has been achieved and within the budget. From the outset we required that the prime contractor accept responsibility for specified performance of the total weapons system including all sub-systems. This goal also has been achieved. With respect to aircraft delivery, I am pleased to advise that a contract delivery schedule has been negotiated which meets the requirements of National Defence."

He added that "subject to satisfactory conclusion of contractual details and upon obtaining approval from Treasury Board, I intend to sign a contract on behalf of the Government of Canada as soon as practicable."

FACT SHEET

CF-18A

Manufacturer	-	McDonnell Douglas
Major sub-contractor	-	Northrop
Dimensions	-	length - 56 feet (16,80 m) span - 40.7 feet (12,21 m) height - 15.3 feet (4,6 m)
Weight	-	more than 51,000 lbs (23,180 kg) (max.)
Max. speed	-	Mach 1.8
Thrust	-	32,000 lbs, (14,000 kg) provided by two General Electric F404 low by-pass turbojet engines.
Armament	-	internal: M-61 mm cannon external: AIM-9 Sidewinder and AIM-7 Sparrow missiles up to 17,000 lbs (7727 kg) of external stores
Radar	-	Hughes APG-65
Order book	-	U.S. Navy and Marines have 1,044 order; (possible increase to 1,366 total)

FICHE TECHNIQUE

CF-18A

fabricant	-	McDonnell Douglas
sous-entrepreneur principal	-	Northrop
dimensions	-	longueur - 16,80 m (56 pieds) envergure - 12,21 m (40.7 pieds) hauteur - 4,6 m (15.3 pieds)
masse	-	plus de 23,180 kg (51,000 lbs) (max.)
vitesse maximale	-	Mach 1.8
poussée	-	14 400 kg (32 000 lbs) fournis par 2 turboréacteurs General Electric F-404 à faible taux de dilution
armement	-	interne: 1 canon M-61 de 20 mm externe: missiles Sidewinder AIM-9 et Sparrow AIM-7 capacité de 7727 kg (17 000 lbs) de matériel extérieur
radar	-	Hughes APG-65
commandes actuelles	-	1044 par la US Navy et l'US Marine Corps (possibilité de 1366)

HISTORY AND PROJECTED MILESTONES

NEW FIGHTER AIRCRAFT PROGRAM

1967 - Canadian Advanced Multi-Role Aircraft (CAMRA) study.

1968 - Canada joined with several NATO European nations in Multi-Role Combat Aircraft (MRCA) project and withdrew the same year.

1972 - Air Defence and Tactical Replacement Aircraft for Canada (ADTRAC) study initiated.

1975 - New Fighter Aircraft (NFA) studies continued, as a result of the Defence Structure Review.

1977 - 17 March - Cabinet decision to proceed with NFA program.

1977 - 1 September - Request for Proposal (RFP) issued to six manufacturers (seven aircraft to be in competition).

1978 - 1 February - Five manufacturers respond to RFP's; six aircraft remain in competition.

1978 - 29 June - Cabinet directs that manufacturers be given until 1 August to refine their initial proposals.

1978 - 23 November - Cabinet decides on a "short list" and directs that draft contracts be negotiated with manufacturers of the CF-16 (General Dynamics) and the CF-18A (McDonnell Douglas).

1979 - 14 December - Announcement of NFA decision delayed until after Federal Election scheduled for Feb 18, 1980. Manufacturers asked to extend bids until after election.

1980 - 15 January - Both manufacturers agree to extend bids without any changes in price or delivery schedule.

1980 - 10 April - Following comparative examination of draft contracts, Cabinet selects McDonnell Douglas CF-18A "Hornet" as the winner of the NFA competition.

PROJECTED

1982 - Delivery of first aircraft

1983 - Aircraft in squadron service

1989 - Program completed

(Français au verso)

HISTORIQUE ET ETAPES PROJETEES DU PROGRAMME

NOUVEL AVION DE CHASSE

HISTORIQUE

1967 - Une étude sur un avion canadien perfectionné polyvalent (CAMRA)

1968 - Le Canada s'associe à certaines nations européennes de l'Otan dans le cadre du programme de l'avion de chasse polyvalent (MRCA) mais se retire la même année

1972 - Lancement d'une étude pour un nouvel avion d'appui tactique et de défense aérienne pour le Canada (ADTRAC)

1975 - Reprise de l'étude du nouvel avion de chasse à la suite de la révision des structures de défense

1977 - Le 17 mars, le Cabinet autorise le programme du nouvel avion de chasse

1977 - Le 1er septembre, des demandes de propositions sont envoyées à six fabricants (sept appareils sont en lice)

1978 - Le 1er février, cinq fabricants répondent aux demandes de propositions; six appareils restent en compétition

1978 - Le 29 juin, le Cabinet accorde aux fabricants jusqu'au 1er août pour réviser leurs propositions initiales

1978 - Le 23 novembre, le Cabinet établit une liste abrégée et autorise la négociation de projets de contrats avec les fabricants du CF-16 (General Dynamics) et du CF-18A (McDonnell-Douglas)

1979 - Le 14 décembre - L'annonce sur le choix du nouvel avion de chasse est reportée après l'élection fédérale du 18 février 1980. On demande aux fabricants de prolonger leur offre jusqu'après l'élection

1980 - le 15 janvier - Les deux fabricants acceptent de prolonger leur offre et de n'apporter aucun changement au prix ou aux dates de livraison

1980 - le 10 avril - A la suite d'un examen comparatif des projets de contrats soumis, le Cabinet choisit le CF-18A Hornet de la McDonnell-Douglas

ETAPES PROJETEES

1982 - Livraison du premier appareil

1983 - Livraison des appareils aux escadrons

1989 - Fin du programme

(English on reverse side)

BACKGROUNDER PAPER

ON THE

NEW FIGHTER AIRCRAFT INDUSTRIAL BENEFITS PROGRAM

1. Why Have an Industrial Benefits Program?

It is the Government's policy that major offshore procurement programs, such as the New Fighter Aircraft (NFA), the CP-140 Aurora, and the Leopard Tank must bring identifiable and appropriate industrial benefits to Canada, partly to compensate Canadian industry for the loss of engineering and manufacturing work it would have performed had domestic sources been used and partly to help the trade balance. Although major industrial benefit programs are self-contained in the sense that they are individually negotiated, administered and accounted for, they are, generally speaking, included in the accounts ledgers of the Canada/United States Defence Production Sharing Agreement in cases where the defence equipment is purchased from the United States.

2. What Are Industrial Benefits?

The New Fighter Aircraft Industrial Benefits Program has, from its inception in 1977, been designed to provide opportunities for economic activity in all industrial sectors and regions of Canada over a period of time extending well beyond the timeframe of the delivery of the aircraft to the Canadian Armed Forces. Since Canada will be buying the aircraft "off the shelf" in order to minimize cost and the waiting period before delivery and since the supplier network for the F-18A has, for some time, been established in the United States industry, it follows that the opportunities for Canada to compete and participate in the current F-18A development and production program are severely limited. Nevertheless, McDonnell Douglas and its suppliers have been able to offer to Canada portions of the F-18A structure, engines, avionics and sub-systems which Canadian companies are expected to be able to produce at competitive prices for the duration of the F-18A program. The great majority of the industrial benefits are, however, not work on the F-18A at all, but rather consists of purchases of other aerospace and non-aerospace goods and services, investments in new Canadian facilities, the transfer of advanced technology to Canadian firms, export marketing assistance for Canadian products and the promotion of tourism to Canada. While the contract negotiated with McDonnell Douglas stresses the placement of industrial benefits in the aerospace and electronics sectors of Canadian industry -- which are key elements in the country's future economic growth -- the diversity of the industrial benefits program which McDonnell Douglas has proposed offers long-term opportunities to participate to a broad spectrum of Canadian industry.

3. What Are the Objectives of the NFA Industrial Benefits Program?

As stated in the New Fighter Aircraft Request For Proposal, issued in September 1977, the objectives of the Department of Industry, Trade and Commerce were to achieve a satisfactory mix of legally enforceable industrial benefit obligations which would:

a. minimize the economic cost to Canada of the program;

b. establish a Canadian industrial capability including engineering cognizance for life cycle support of the aircraft weapon system procured;

c. improve the capabilities of Canadian industry by stimulating technological advancement through the transfer of technology and the exercise of Canadian resources in the areas of design, development and manufacturing;

d. improve the competitiveness of Canadian industry and its access to world markets by establishing its autonomy in selected manufactured products and services;

e. provide a suitable workload to utilize the resources of Canadian industry in order to meet Government objectives of stable employment and regional distribution of industrial activity;

f. stimulate Canadian exports consistent with trade and foreign policy objectives, particularly in those areas which have been the recipient of substantial government assistance;

g. reverse or reduce Canadian imports in aerospace products and other manufactured goods and services.

4. How McDonnell Douglas has Proposed to Meet the Objectives:

Contractual negotiations over the past year with McDonnell Douglas have included the terms and conditions of an industrial benefits commitment by the company which totals $2,910 million (then-year CDN. $ - FATIC excluded) of eligible industrial benefit transactions. Approximately $460 million of the total is comprised of conditional commitments which depend primarily on Canadian firms being able to provide competitive prices on work associated with the manufacture of components the F-18A for Canada and other customers in the future.

The McDonnell Douglas commitment is not fixed to particular projects or work packages or to specific Canadian companies or geographic regions. Rather, the commitments are to dollar totals in specified time periods extending to December 31, 1995. McDonnell Douglas has also committed to a Distribution Plan, the key emphasis of which is the stimulation and continued growth of advanced technology activities. The Distribution Plan commits McDonnell Douglas to place at least 60% of the total industrial benefits in the combined Aerospace and Electronics industry sector; to place at least 10% of the total benefits in Advanced Program Activity, Technology Transfer, and Licence Agreements in the Aerospace and Electronics sectors, and to limit its tourism promotion program to not more than 10% of the total industrial benefits program.

5. How Were the Commitments Evaluated?

The industrial benefit commitments were evaluated by a team of Department of Industry, Trade and Commerce officials - the majority of whom took part in the evaluation of the contractors' original New Fighter Aircraft proposals in 1978 - using criteria which took into consideration the dollar value of the benefits and qualitative factors such as technology enhancement, economic and regional impacts, the contribution to a life cycle support capability for the New Fighter Aircraft and risk. The evaluation was done on the basis of both known and probable industrial benefit implementation plans of McDonnell Douglas and its suppliers, and assumed that the contracted Distribution Plan would be met.

6. What the McDonnell Douglas Industrial Benefits Program Consists Of:

To be eligible as an NFA industrial benefit, a business transaction must meet the following basic criteria:

a. a benefit must be brought about by McDonnell Douglas, its divisions, its first-tier sub-contractors, or the United States Government as a result of the NFA program;

b. the benefit must accrue to Canada after March 18, 1977;

c. only the Canadian content of benefits is eligible for credit;

d. in the case of goods and services which have been procured from Canada in the past, only increases over a baseline period will be considered as brought about by the NFA program;

e. benefits cannot include raw materials and imported materials and services.

McDonnell Douglas' industrial benefits commitment, which totals $2,910 million in then-year Canadian dollars, is broken into two parts:

(i) Firm Commitments totalling $2,453 million. These have been identified as a variety of purchases under sub-contract of aerospace and electronics products; and

(ii) Conditional Commitments totalling $457 million. These are primarily the procurement from Canadian sources of components and services associated with the CF-18A and F-18A programs, but for which the Canadian companies must provide prices competitive with United States sources. In order to assist Canadian companies to win this business, the Department of Industry, Trade and Commerce is prepared to consider applications for Defence Industry Productivity (DIP) Program funds in order to cover start-up costs. These funds are available to firms in all parts of Canada, provided the usual criteria of the DIP Program are met.

In addition to purchases of goods and services, provision is made in the contract to allow McDonnell Douglas to be credited for new business activities which it brings about in Canada in the fields of investment, technology transfer, advanced program activity, export marketing assistance, and tourism. This flexibility in approach is triply beneficial -- it provides a "redundancy" cushion; it encourages the flow of a variety of attractive benefits, including engineering design and development work, and it provides opportunities for companies and regions which are not traditionally associated with the aerospace and electronics industries. The McDonnell Douglas commitment offers excellent long-term potential for aggressive and competitive Canadian firms since the contract forces the prime contractor and its associated companies to consider Canadian firms in a way many of them never have before. The contract will result in new business relationships that, in turn, should result in further work in Canada beyond the end of the formal NFA industrial benefits program (in 1995) and well into the 21st century.

Specific aspects of the McDonnell Douglas industrial benefits program are highlighted in the following paragraphs. It should be kept in mind that, while some benefits have been placed already, most of the following details are based on information obtained from McDonnell Douglas during the negotiation phase and are not contractual commitments.

Examples of Industrial Benefits for Canadian industry

- Numerical Control Machining Centre
- Turbine Engine Blade and Vane Facility
- Advanced Plastic Mold Making Shop
- Engine Components Manufacture
- Graphite Composite Structures Design and Manufacturing
- CF/F-18A Airframe, Avionic and Sub-Systems Manufacturing
- Heat Pump Component Facility
- Glass Manufacturing Plant
- New DC-9/DC-10 Transport Component Manufacture
- Avionics Equipment Purchases
- Aeroengine Assembly and Test
- Participation in Advanced Programs (new and derivative aircraft and weapons systems)
- Technology Cooperation and Assistance
- Technology Transfer and Licensing
- Export Market Development Assistance
- Tourism Development

Technology Transfer Opportunities

- Computer Aided Machining
- Advanced Program Activity
- Aircraft Structure Manufacture
- Engine Component Manufacture, Assembly and Test
- Turbine Engine Blade and Vane Manufacture
- Avionics Systems Development and Manufacture
- Radar Data Processor Manufacture
- Advanced Composite Materials - design and manufacture
- Pipeline Support Structures
- Cryogenic Insulation

- o Cryogenic Wind Tunnel
- o Ion Vapour Deposition
- o Microwave Vacuum Drying

Regional Distribution

The most readily understandable expression of the economic impact of the McDonnell Douglas industrial benefits program is to focus on the "Sales/Purchase Value" resulting from the elements of the program. Using this approach, in the case of an investment in a facility, only the "output" or sales of the facility are included with the value of any purchases from other Canadian sources since it is these factors which most closely reflect the economic impact of a given benefit which, in turn, creates jobs for Canadians.

Assessment of Regional Distribution of McDonnell Douglas Industrial Benefits - Sales/Purchase Value Basis

	Quebec	Ontario	Rest of Canada
Allocated (contracted or identified)	$ 889M	$ 436M	$ 235M
Most Pessimistic Estimate	1,416M	643M	305M
Best Guess Estimate	1,573M	1,296M	394M
Most Optimistic Estimate	1,860M	1,449M	498M

NOTE: Total Best Guess Estimate for all of Canada is $3,263 million.

Some of the Canadian Companies Which Are Early Participants in the CF-18A Industrial Benefits Program

- o Broderna Oddsberg Enterprises Ltd., Prince Edward Island
- o Enheat Limited, Nova Scotia
- o IMP Aerospace Limited, Nova Scotia
- o Canadian General Electric, Quebec and Ontario
- o Garrett Manufacturing Limited, Ontario
- o Litton Systems (Canada) Limited, Ontario
- o Dilworth, Secord, Meagher and Associates Limited, Ontario
- o McDonnell Douglas Canada Ltd., Ontario
- o Walbar Machine Products of Canada Ltd., Ontario
- o TFI Fastener Corporation, Ontario
- o Bristol Aerospace Limited, Manitoba
- o Mobil Auger Company, Alberta
- o Canadian Aircraft Products Ltd., British Columbia

7. How Many Jobs Are Created?

The Department of Industry, Trade and Commerce estimates that the McDonnell Douglas industrial benefits program will create approximately 60,000 to 70,000 personyears of direct employment during the life of the program, which extends from March 1977 to December 1995, or an average of 3,700 new jobs for Canadians during the 18 3/4 years' duration of the contract. It is not possible to make a meaningful estimate of the type and number of job skills that will be required, but with the emphasis placed on the

aerospace and electronics industries, it is safe to assume that most of the jobs will be in the skilled and semi-skilled manufacturing areas. Significant engineering opportunities should be created by the assurance of Canadian participation in advanced program activities, such as joint co-development and co-production programs with United States companies, as well as the transfer of advanced technologies. McDonnell Douglas has assured the Government that it will endeavour to encourage Canadian companies participating in the industrial benefits program to undertake manpower planning activities in cooperation with the Canada Employment and Immigration Commission so that timely measures may be taken to have trained Canadians available to fill job opportunities as they arise during the life of the program.

8. Why Final Assembly and Test in Canada (FATIC) Will Not Be Done by Canadian Industry:

In an evaluation of FATIC, the Department of National Defence concluded that it is neither necessary nor sufficient for the establishment of a full NFA life cycle support capability in Canadian industry. The Departments of Industry, Trade and Commerce, National Defence, and Supply and Services examinations of the technology transfer benefits of FATIC have concluded that the levels of technology transfer claimed by Canadian industry to be associated with FATIC will not, in fact, materialize and that there are alternative ways of obtaining technology at lesser cost. From the viewpoint of economics, FATIC would create approximately 120-130 jobs at the highly skilled labour and technologist levels for some 8 to 9 years. In summary, final assembly and test of the CF-18A in Canada was considered by the Government not to be a cost-effective solution for employment creation, technology transfer, or life cycle support. A capability to perform life cycle support is, however, planned by the Department of National Defence to be developed within Canadian industry during the delivery phase of the CF-18As. Accordingly, by 1988 or 1989, Canadian companies should be able to do the bulk of the third level repair, overhaul, maintenance, and modification activities on the NFA, its components and systems.

9. How The Industrial Benefit Commitments Will Be Enforced:

There are only two ways in which industrial benefit offers can be translated into enforceable obligations. The first is to ensure that non-performance of the industrial benefit agreement constitutes a breach of the contract which would entitle the Government to terminate for default. The second is to have adequate provision for "liquidated damages". In view of the paramount interest of the Department of National Defence in obtaining delivery of new aircraft, the first method is impractical. Hence, providing for liquidated damages is the only viable method of obtaining enforceable industrial benefit obligations.

McDonnell Douglas has agreed to pay liquidated damages to the Government should the company fall short of meeting its industrial benefit commitments, both to dollar totals and to the distribution of the benefits to the aerospace and electronics industry sectors. Taking the worst case, should McDonnell Douglas fail to meet all of its industrial benefit commitments, it would owe the Government over $120 million in liquidated damages which is a very substantial portion of the profit which the company expects to make on the sale to Canada. If the company achieves some, but not all, of its commitments, then it must pay the Government between 1.5% and 10% of the amount of the shortfall in meeting its commitment with the percentage depending on the year in which the shortfall occurs and how close the achievement is to the target for the year.

10. How The McDonnell Douglas Benefits Compare With Those Offered by General Dynamics

A side-by-side comparison of the two offers (which include FATIC) reveals the following:

	GENERAL DYNAMICS (CF-16)	McDONNELL DOUGLAS (CF-18A)
BENEFITS		
Firm	$3,878 M	$2,453 M
Conditional	22 M	594 M
Total	$3,900 M	$3,047 M
LIQUIDATED DAMAGES		
Maximum	$189.6 M	$120.3 M
Assuming 50% of Commitment is Achieved	$ 40.0 M	$ 45.1 M
DISTRIBUTION PLAN		
Aerospace & Electronics Sectors (minimum)	65%	60%
Aerospace & Electronics Purchases	11%	
Aerospace & Electronics Technology Transfer	10%	10%
Aerospace & Electronics Advanced Program Activity	10%	
Tourism		10% (maximum)

The industrial benefits programs of the two competitors, when looked at in their entirety, from the perspectives of quantity, quality, technology transfer, regional distribution, and risk, were both acceptable, but the McDonnell Douglas program was judged to be the superior.

I don't understand this.

11. Conclusion:

Given the way contracts normally work (e.g. requirements for quotations to the prime contractor, etc.), many details of the industrial benefits work will not be known for months or even years after the NFA procurement contract is signed. Related to this, and stemming from the very long-term and competitive aspects of the industrial benefits program, no one is, at present, in a position to know the final type and distribution of business activity and investment stemming from the contract. For example, the program may ultimately products that, in some cases, have not been invented yet, manufactured by companies that may not now be in existence. There are incentive features and other mechanisms in the contract which take into account the need for advanced technology work and for regional development and which give the Government flexibility to ensure that equity concerns are addressed to the appropriate degree. Mention was made earlier of the application of the DIP Program. It may be used to provide financial support for industry modernization and source establishment costs in order to allow Canadian firms to take advantage of the opportunities provided by the NFA industrial benefits program.

By selecting the CF-18A and its accompanying industrial benefits program, the Canadian Government has obtained an outstanding economic deal for Canada. The door has been opened to all sectors of Canadian industry, but particularly the high technology ones -- to a long-term opportunity to go after $3 billion worth of business.

Office of the Minister
Supply and Services Canada

Cabinet du Ministre
Approvisionnements et Services Canada

REMARKS BY THE

HONOURABLE JEAN-JACQUES BLAIS

MINISTER OF SUPPLY AND SERVICES

ON THE OCCASION OF THE ANNOUNCEMENT

CONCERNING THE PROCUREMENT OF

NEW FIGHTER AIRCRAFT FOR

THE CANADIAN ARMED FORCES

OTTAWA, ONTARIO

APRIL 10, 1980

As a result of the decision that has just been announced by my colleagues, I have been directed by the Cabinet to carry through to conclusion contract negotiations with the McDonnell Douglas Corporation. You may be interested to know that a general agreement on the major points between the two parties has been reached and all that remains to be completed is the detail work.

The contract will be a further example of the benefits secured under the Defence Production Sharing Agreement which has been in effect with the United States for a number of years. In this instance, Canada will purchase a sophisticated weapons system, on an economic basis, and yet will have returned to this country offsets, development and production work in high technology.

I am pleased to announce we have an agreement in principle with the company on all the terms which will appear in the contract such as price, quantity, industrial benefits to Canada and method of cost control. The experience gained in the Aurora program has been most helpful and we are following procedures which have proved to be successful in the procurement of the long range patrol aircraft.

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All of the goals identified have been achieved. The Department of National Defence identified the number of aircraft required to fulfill our military obligations. That has been achieved and within the budget. From the outset we required that the prime contractor accept responsibility for specified performance of the total weapons system including all sub-systems. This goal also has been achieved. With respect to aircraft delivery, I am pleased to advise that a contract delivery schedule has been negotiated which meets the requirements of National Defence. Furthermore, as indicated by the Minister of Industry Trade and Commerce, the contractual arrangements regarding industrial benefits for Canada provide incentives for the contractor to generate industrial offsets and sub-contract work in high technology in slow growth regions of the country. In this regard, the contract is structured to reward the contractor for desired performance and to reduce the price for failure to perform. In other words, the overall contract negotiated to date is a good, sound, commercial arrangement achieved in a highly competitive environment for the benefit of Canada and Canadians. The competitive atmosphere permitted our negotiators to secure from the successful contractor offset benefits additional to those originally identified.

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During the 9 year tenure of the contract, payments will be made to the contractor upon achievement of predetermined and measurable milestones. As in the Aurora program, which is successfully running within budget and on schedule, we will have a resident team in the contractor's facility to ensure that all aspects of contract performance are achieved. My officials will maintain close liaison with the Ministry of Industry Trade and Commerce to monitor industrial offset benefits. At this time I would like to pay tribute to the project team that handled the negotiations of this very complex contract.

Subject to satisfactory conclusion of contractual details and upon obtaining approval from Treasury Board, I intend to sign a contract on behalf of the Government of Canada as soon as practicable.

Minister of National Defence

Remarks by the Honourable Gilles Lamontagne

Ministre de la Défense nationale

Allocution de l'honorable Gilles Lamontagne

For Release:
April 10, 1980

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Statement by

THE HONOURABLE GILLES LAMONTAGNE

Minister of National Defence

on the

NEW FIGHTER AIRCRAFT

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I am pleased to announce that, after three years of intensive study, negotiation and evaluation, the Government has decided which aircraft is to become Canada's new fighter.

The Cabinet has directed my colleague, the Minister of Supply and Services, to conclude and sign with the McDonnell Douglas Corporation an acceptable contract for the delivery of CF-18A aircraft for the Canadian Forces, based on the company's latest formal offer to the Canadian Government.

Although both competitors offered us capable aircraft, the CF-18A has been found to be better suited to Canada's diverse military requirements and this factor was of prime importance in the decision process. Moreover, I would like to emphasize that our most recent negotiations with the two competing manufacturers have now proved conclusively that the McDonnell Douglas offer will bring better industrial benefits to Canada over the duration of the contract.

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Furthermore, we are now certain that a McDonnell Douglas contract will contribute to the further strengthening of the Quebec-based aerospace and electronics industries. My colleague, the Minister of Industry, Trade and Commerce, will cover this area in more detail in a few moments.

The McDonnell Douglas Corporation's legally binding offer to the Government specifies a minimum of 137 aircraft, although the actual number delivered may vary depending on certain factors that cannot be established at present. The contract assures us, however, that we will be able to meet our target of approximately 130 to 150 aircraft.

The figure of 137 aircraft assumes that the United States does not charge Canada for certain research and development costs associated with the F-18A program. The Canadian Government has already asked the U.S. Government that these charges be waived, which is permitted by U.S. law. Beyond this, the McDonnell Douglas offer includes a profit incentive plan which encourages the company to produce the aircraft at better than the ceiling price, which in turn would result in the eventual delivery of as many as ten additional aircraft.

Delivery is scheduled to begin in the latter half of 1982 and will continue at the rate of two aircraft per month until 1989.

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Although the basic airframe performance of the two contenders is similar, with each aircraft displaying advantages in specific areas, the McDonnell Douglas CF-18A was found to have certain characteristics that make it more effective in the broad spectrum of Canadian missions. Let me outline some of the more important factors that led to our decision.

For example, the CF-18A's twin engine configuration gives it an important margin of safety over the single engine CF-16. This means that fewer CF-18A's should be lost accidentally over the life of the fleet, a factor which takes on added human importance when one considers the nature of the Canadian climate and geography. The forecast accidental losses for the CF-16 are such that initial fleet size advantage would disappear during the life of the NFA fleet.

The CF-18A was also found to have an edge in many of its internal systems. Although in most respects the margin is small, the combined effect is an overall superiority in mission capability in the context of Canadian Forces operations.

The size of the CF-18A will allow improvements and additions to be made to the basic aircraft and thus offers more flexibility in coping with the changing strategic and tactical circumstances which Canada will undoubtedly experience through to the early years of the next century.

.../4

A detailed cost analysis indicated that the overall cost to Canada of purchasing the new fighters and operating them into the next century is virtually identical for the CF-16 and CF-18A. Here again each has certain advantages which balance out in the total picture. The CF-16 uses slightly less fuel, but attrition costs are higher, as I mentioned a moment ago, and certain maintenance costs are expected to be greater.

Let me refer, in passing, to recent attention given to a report of the United States General Accounting Office, in which certain criticism was directed to the U.S. Navy F-18 program. I would like to assure you that we have been following the Hornet's development very carefully, and that the GAO report contained no surprises. Much of the criticism had little or no bearing on a Canadian purchase of the aircraft. Certain technical problems have in fact been uncovered during the intensive flight trials now underway, but these are typical of the sort of problems that arise in the early days of all fighter programs. We are furthermore confident that corrective action will be effective.

I would like to reduce the Government's rationale in this fighter decision to its fundamentals. The short list effectively narrowed the field down to the best two affordable alternatives, both lightweight fighters; having now evaluated these two remaining options in great detail, the Government has concluded that it is better for Canada to obtain slightly fewer of the more versatile and advanced aircraft than to purchase a marginally greater number of the contender which is less well suited to Canadian requirements.

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I have asked the Project Manager to ensure that unclassified and releasable information on the military evaluation process is available to you at the time of contract signing.

In conclusion, I am confident that the new fighters we are about to purchase, together with the airmen who fly and maintain them, will give Canada the capability to protect her sovereign airspace and contribute effectively to the deterrence of war. Canada has a proud heritage in the field of military aviation; our airmen are living up to that tradition today by operating our existing fighter fleets safely and effectively in spite of the advanced age of these aircraft. I know that they will continue to do so for just a few years more, in the knowledge that an excellent new fighter is on the way, one that will allow them to serve their country with distinction in the pursuit of credible deterrence and world peace.

Statement by the Minister of Industry, Trade and Commerce

The Honourable Herb Gray

on Industrial Benefits from the New Fighter Aircraft

I am very pleased to be able to announce that the Federal Government has negotiated an excellent package of industrial benefits from the McDonnell Douglas Corporation, in connection with the purchase of the CF-18A as Canada's New Fighter Aircraft (referred to as the NFA). Canadian industry will benefit by at least $2.91 billion dollars from activities undertaken by McDonnell Douglas and its associated companies since 1977, the formal start of the NFA acquisition program, through to 1995.

These activities, which will be spread across the country, will be concentrated in high technology areas -- at least 60 percent being contractually committed to the aerospace and electronics sectors of our economy, and at least 10 percent being committed to technology transfer and to participation by Canadian companies in the development and manufacture of new types of aircraft and related products.

In terms of direct employment, officials in my Department estimate that these activities will provide between 60,000 and 70,000 person-years of work over the life of the contract. It is also anticipated that the working relationships established during the program between Canadian companies and firms in the United States will lead to a continuing and increasing industrial activity in Canada, well beyond the formal end of the program (which is 1995), and into the 21st century.

Before going into further detail, I want to pause for a moment to clarify the situation regarding the exact nature of industrial benefits -- a complex subject about which there appears to be many misunderstandings. It must be recognized that the fighters we are buying will come from a U.S. production line -- they will NOT be built in Canada. Although some parts will be built in Canada, both for our own fighters and for those that will be delivered to other countries in the future, the bulk of the industrial benefits will consist of purchases of aerospace and non-aerospace goods and services, investments in new Canadian facilities, the transfer of advanced technology to Canadian firms, export marketing

assistance for Canadian products, and the promotion of tourism to Canada. While the contract with McDonnell Douglas stresses the aerospace and electronics sectors -- which are key elements in the country's economic growth -- the diversity of the industrial benefits program which McDonnell Douglas has proposed offers long-term opportunities to a broad spectrum of Canadian industry.

There has been considerable controversy over the last several weeks regarding the relative merits of the industrial benefits offers from McDonnell Douglas and General Dynamics -- both with respect to the country as a whole, and in terms of the impact of each of the offers upon the various regions of the country. A few days ago, I said that I intended to make public as many facts and figures as I could, as soon as a decision was announced. I am pleased to be able to release today a document entitled "New Fighter Aircraft Industrial Benefits - Analysis and Evaluation". It describes in considerable detail the variety of evaluative techniques used by my officials to come to a conclusion on this complex issue, and incorporates changes made last night to the General Dynamics offer.

For example, taking into account only the sales and purchase values of the benefits, a method which most closely represents the real economic impact of an activity, the McDonnell Douglas program, for all of Canada, was evaluated at some $3,263 million, as compared to $2,618 million for the General Dynamics offer. Focussing specifically on Québec, our best estimate is that some $1,573 million will accrue from the McDonnell package to industries located in that province -- while only $1,472 million would have accrued to Québec from the General Dynamics offer, using the identical analytical approach. These figures illustrate that, regardless of what might be implied in certain newpaper advertisements, the interests of all Canadians are being served and protected by the Federal Government.

The analysis leads to one conclusion, that when looked at from the perspectives of quantity, quality, technology transfer, technological advancement opportunities, regional distribution, and risk, the McDonnell Douglas industrial benefits program is clearly the superior of the two -- and thus represents the best deal for Canada as a whole, and for its various regions. The contract which has been negotiated is an excellent one, and should provide meaningful opportunities to all Canadians, now, and for many years to come.

As I mentioned earlier, one of our key objectives is to provide Canadian companies with the opportunity to establish new long-term relationships with the prime contractor, and its associated companies. In order to profit from these opportunities, however, Canadian companies must nonetheless be competitive, not only amongst themselves, but against U.S. firms. I have today sent a telex to my provincial counterparts, urging them to provide, in their own jurisdictions, a framework, and a business climate, which will be supportive of the development of advanced technology sectors such as aerospace and electronics. I should also mention that my Department will continue to direct and monitor very closely this obligation by McDonnell Douglas, and will do all in its power to help bring about the realization of industrial development opportunities in all parts of the country. To this end, my Department stands ready to assist in this process, as does the Department of Regional Economic Expansion. Terms of the contract with McDonnell Douglas are designed to ensure that an equitable distribution of industrial and economic activity across all regions of the country will be achieved.

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