ANNUAL REPORT TO PARLIAMENT

President
of the Treasury Board

Président
du Conseil du Trésor

Report on the Application of the *Alternative Fuels Act*

Fiscal Year 1997–98

Canada

ANNUAL REPORT TO PARLIAMENT

Report on the Application of the *Alternative Fuels Act*

Fiscal Year 1997–98

Published by the Treasury Board of Canada Secretariat

This document is available in alternative formats
and on the TBS Internet site at the following address:
http://www.tbs-sct.gc.ca

Catalogue Nº BT76-1/1998
ISBN 0-662-63990-1

President's Message

I am pleased to table in Parliament the annual Report on the Application of the *Alternative Fuels Act*, for the fiscal year 1997–98, pursuant to the *Alternative Fuels Act*.

Marcel Massé
President of the Treasury Board

Table of Contents

Executive Summary

Annual Report on the *Alternative Fuels Act*

The *Alternative Fuels Act* (AFA) requires the President of the Treasury Board to report annually on the application of the Act in respect of all federal government bodies named in schedules I, I.1 and II of the *Financial Administration Act* (FAA).

Compliance with the *Alternative Fuels Act*

With regard to the acquisition of alternative fuel vehicles, the federal government through activities of the federal bodies named in schedules I, I.1 and II of the *Financial Administration Act*, is in full compliance and in fact, has exceeded the requirements of the *Alternative Fuels Act*.

With regard to the use of alternative transportation fuels (ATF), all vehicles in the federal fleet capable of operating on ATF use these to the maximum extent possible.

Requirements of the *Alternative Fuels Act*

The Act requires that, following a seven-year phase-in period, for the fiscal year commencing April 1, 2004, where it is cost-effective and operationally feasible, 75 per cent of all automobiles, passenger vans, light- and medium-duty trucks and buses operated by federal government departments and agencies use ATF.

For the fiscal year commencing April 1, 1997, the Act required that 50 per cent of newly acquired vehicles, deemed to be both cost-effective and operationally feasible for the use of ATF, be capable of operating on these.

The Act also requires that, when it is cost-effective and operationally feasible, a federal body shall use ATF in the operation of any motor vehicle capable of operating on such fuels.

1. Introduction

The *Alternative Fuels Act* (AFA) requires the President of the Treasury Board to report annually on the application of the Act in respect of all federal government bodies (departments and agencies) named in schedules I, I.1 and II of the *Financial Administration Act*.

1.1 *Alternative Fuels Act*

The *Alternative Fuels Act* received Royal Assent on June 22, 1995, and took effect on April 1, 1997. The purpose of the Act is to accelerate the use in Canada of alternative transportation fuels (ATF) in motor vehicles in order to reduce the emission of carbon dioxide and other greenhouse gases, thereby lessening dependence on petroleum-based fuels for transportation. The Act targets the federal vehicle fleet thus providing the government with a leadership role in the use of ATF.

The Act requires that, following a seven-year phase-in period, for the fiscal year commencing April 1, 2004, where it is cost-effective and operationally feasible, 75 per cent of all automobiles, passenger vans, light- and medium-duty trucks and buses operated by federal government departments and agencies, in the aggregate, use ATF.

Specifically, the Act requires departments and agencies to review each new vehicle acquisition in terms of its estimated annual fuel consumption and primary operational tasks, and determine whether using ATF would be both cost-effective and operationally feasible. This has been interpreted to mean that, if a new vehicle is less expensive to operate on ATF in comparison with a conventional fuel, and the vehicle can fulfil its operational duties, then it becomes part of a group of new acquisitions that is viable for operation on ATF.

For the fiscal year that began on April 1, 1997, 50 per cent of those vehicles had to have been capable of operating on ATF. For the fiscal year commencing April 1, 1998, the requirement increased to 60 per cent. For the fiscal year commencing April 1, 1999, and for every one thereafter, 75 per cent of the viable vehicles must be capable of operating on ATF.

The Act also requires that, when it is cost-effective and operationally feasible, a federal body shall use ATF in the operation of any motor vehicle capable of operating on such a fuel.

In July 1995, the Treasury Board of Canada Secretariat revised the Motor Vehicle Policy to ensure effective application of the Act and its regulations, and to provide leadership and assistance to departments and agencies to help them meet the obligations set forth in the Act.

This is the first Annual Report on the application of the *Alternative Fuels Act*.

Section 2 of the Report assesses the federal government's compliance with the Act. Section 2.1 summarizes the application of the Act in relation to 1997–98 fiscal year vehicle acquisitions and section 2.2 reports on the extent of ATF usage in the federal fleet during the 1997–98 fiscal year.

Section 3 concludes the report with a discussion of the federal government's commitment to continuing to meet the requirements of the Act, along with some factors limiting the use of ATF in the federal fleet.

2. Compliance with the *Alternative Fuels Act*

Taking into account the acquisition activities of all departments and agencies, it is reported that the federal government is in full compliance with the Act. Section 2.1 provides a summary of the application of the Act on a government-wide basis.

Furthermore, it is reported that all vehicles in the federal fleet capable of operating on ATF use such fuels to the maximum extent possible. Section 2.2 reports on the consumption of ATF in the federal fleet for the 1997–98 fiscal year.

2.1 New Vehicle Acquisitions

The table below provides a summary of the application of the Act on a government-wide basis. This table illustrates that at least 50 per cent of all new vehicle acquisitions that should be cost-effective and operationally feasible for ATF use are actually capable of operating on ATF.

Total Number of Vehicles Acquired*	Total Vehicles Cost- effective for Use of ATF*	Total Vehicles Cost-effective and Operationally Feasible for Use* of ATF	Actual Number of ATF Vehicles Acquired*	50% Target – Required Acquisitions as per Act*
2,250	467	45	131	23

A summary of the application of the Act on a department/agency basis is contained in Annex 2.

* Definitions of the table headings are contained in Annex 3.

Meeting and Exceeding the Requirements of the Act

The federal government, through the acquisition activities of departments and agencies, has actually surpassed the requirements of the Act for the 1997–98 fiscal year. This pattern can be attributed to the mandate of certain departments/agencies to demonstrate leadership in the use of ATF. Similarly, some departments and agencies have assumed the responsibility to promote environmentally responsible practices throughout the federal government and have introduced ATF into their 1997–98 acquisitions to the maximum extent possible.

The FleetWise program of Natural Resources Canada conducted a survey of all fleet managers to determine what proportion of the approximately 130 new 1997–98 vehicles capable of operating on ATF were factory produced and what proportion were converted after acquisition. The survey results represent the best estimate available at the time this report was tabled; approximately half of the new alternative fuel vehicle acquisitions are factory produced and the other half are converted.

2.2 Use of Alternative Transportation Fuels in the Federal Fleet

The Act requires federal bodies to use ATF in the operation of any motor vehicle in the federal fleet already capable of operating on such a fuel to the maximum extent possible, where cost-effective and operationally feasible.

The following table summarizes the estimated fuel consumption by fuel type for the 1997–98 fiscal year for the 17 departments and agencies with the largest fleets.

Fuel Type	Number of Vehicles	Average Annual Kilometers	Total Annual Consumption	Average Annual Consumption Per Vehicle
Conventional Fuels				
Gasoline	21,797	22,854	72,243,911 L	3,314 L
Diesel	346	18,384	901,958 L	2,607 L
Alternative Fuels				
Natural Gas	4	30,062	10,652 Kg	2,663 Kg
Natural Gas/Gasoline	167	20,860	510,635 L	3,058 L
Propane	279	20,876	1,315,786 L	4,716 L
Propane/Gasoline	182	22,424	645,605 L	3,547 L
Ethanol 10 [1]	Data not available			
Ethanol 85	2	49,339	16,321 L	8,161 L
Methanol 85	19	18,959	43,397 L	2,284 L
Total	**22,796**			

Annual fuel consumption was calculated for each vehicle using estimated annual kilometres and the city fuel efficiency ratings provided by Natural Resources Canada.

3. Conclusion

Federal Government Commitment

During the 1997–98 fiscal year, the federal government, through the activities of the federal bodies named in schedules I, I.1 and II of the *Financial Administration Act*, has not only complied with but has exceeded the requirements of the *Alternative Fuels Act*.

The federal government is committed to continuing to comply with the requirements of the Act and is committed to demonstrating leadership in the attainment of all federal environmental objectives. Indeed, all departments and agencies are interested in expanding their current use of ATF fuels and ATF vehicles as long as the use of such products are cost-effective and operationally feasible for their specific requirements.

---

[1] **Ethanol 10**: Reliable data on total fuel consumption of Ethanol 10 fuel are not available. Sales of this fuel are not always tracked individually in the current reporting systems by either the oil companies or the fleet management system contractors. As a result, Ethanol 10 is tracked as part of the reported data, either with Ethanol 85 or with gasoline. In many federal departments, vehicle users currently purchase this fuel type to the maximum extent possible.

It has been the experience of the federal government that the availability of ATF vehicles and associated ATF infrastructure has not yet materialized to the extent first envisaged when the *Alternative Fuels Act* was passed in June 1995. To date, and particularly during the 1997–98 fiscal year, the federal government has encountered many issues that place practical limitations on the use of ATF and ATF vehicles. The resolution of many of these issues will surely lead to the acquisition of more ATF vehicles for the federal fleet and greater use of ATF across the federal government.

Despite the commitment of the federal government to increase the use of ATF in the federal fleet, a number of external factors continue to limit the feasibility of using ATF vehicles. During the 1997–98 fiscal year, the acquisition of ATF vehicles and the use of ATF was curtailed by a limited ATF infrastructure across many parts of the country and a limited selection of appropriate ATF vehicles on the market, amongst other factors.

The section below summarizes some of the key issues that have limited the use of ATF vehicles and ATF in the federal government during the 1997–98 fiscal year.

1. During the 1997–98 fiscal year, there was a limited supply of factory produced ATF vehicles, in comparison with the number of gasoline models, suitable for federal government operations.

2. Compared to similar classes of gasoline vehicles, premiums for the acquisition of factory produced ATF vehicles range from $2,364 to $7,143, and premiums for after-market conversion kits range from $2,745 to $5,970. It is generally the case that the lower-priced kits are indicative of earlier, lower technology while the higher priced kits reflect newer, better technology.

3. Inconsistent and delayed manufacturer delivery schedules for ATF vehicles make it difficult for federal departments to plan and budget for their acquisition.

4. Natural gas and propane infrastructure is limited; supply of both fuel types is unreliable outside of urban areas and supplier hours of operation are often limited. The use of a bi-fuel vehicle would enable the operator to use gasoline in those areas where the appropriate ATF is not available. Such a practice would, however, have a significant effect on the ability to recover ATF costs over the life of the vehicle through fuel savings.

5. The effectiveness and quality of vehicle conversion kits are questionable when emissions-testing analysis of converted vehicles reveals higher emissions in comparison to a gasoline vehicle. As well, the highly sophisticated onboard diagnostic computers in today's vehicles have severely curtailed the after-market conversion industry's ability to convert engines properly. Finally, the federal government has experienced problems in

the operation of converted vehicles, including a tendency for these to backfire, thereby reducing confidence in the performance of the conversion kits.

6. The availability of approved warranty service facilities offering routine maintenance and repair services for factory produced or converted ATF vehicles is limited, thereby restricting the operational feasibility of using an ATF vehicle in many locations.

7. Gasoline vehicles remain popular as a result of new technology that has enabled excellent fuel efficiency, reduced emissions and better engine performance than ATF converted vehicles.

8. When comparing the energy equivalency of ATF to gasoline, it is sometimes the case that ATF is more costly than gasoline at the pump, thereby reducing the cost-effectiveness of using ATF. Furthermore, because many federal departments currently access gasoline through bulk facilities at a price considerably lower than the ATF equivalent sold at the pump, the use of ATF is not a viable option.

   ATF is available through bulk facilities, and at a much lower cost than gasoline purchased at the pump; however, few federal departments have access to such supplies.

9. Some areas still restrict the use of propane vehicles, for example in underground parking garages and on airport tarmacs.

10. Available cargo space is reduced with the addition of an ATF tank.

11. The lower the average annual kilometres traveled by a vehicle, the less likely it is that ATF use will be cost-effective.

12. Budgetary constraints and allocations limit the ability to finance initial capital costs to acquire ATF vehicles.

Annex 1 – Terminology

The following section provides definitions of the frequently used terms in this Report.

Alternative Transportation Fuel

Alternative transportation fuel, or ATF, is prescribed by regulation to include, but is not limited to, ethanol, methanol, propane gas, natural gas, hydrogen or electricity when used as a sole source of direct propulsion energy.

The definition of ATF is extended to include blended fuels when an alternative fuel makes up at least 50 per cent of the blend for the purposes of *acquiring* motor vehicles. Flex fuel and bi-fuel vehicles are also considered to be ATF vehicles for the purposes of *acquiring* motor vehicles.

The definition of ATF is also extended to include bio-diesel and blended fuels to the extent that any of the approved ATF appears in the blend for the purposes of *using* alternative transportation fuels.

Cost-effective

A vehicle is considered cost-effective for ATF use if it can be demonstrated that the additional cost of either converting a vehicle to use ATF or acquiring a factory produced ATF vehicle will be recovered in the form of fuel savings over the life of the vehicle.

Where net fuel savings are greater than $1, a vehicle is considered cost-effective for ATF use.

Motor Vehicle

For the purposes of reporting on the *Alternative Fuels Act*, motor vehicle is defined as including automobiles, passenger vans, light- or medium-duty trucks and buses.

Operationally Feasible

A vehicle is considered to be operationally feasible for ATF use when it can be demonstrated that the vehicle will continue to be able to fulfil its primary operational tasks.

The definition of operational feasibility will vary across departments and agencies according to a wide range of variables, including: the specific travel patterns of each vehicle; the mandate of the department or agency; the availability of ATF supply in all locations the vehicle will travel; vehicle performance requirements; and vehicle availability or availability of a suitable conversion kit.

Annex 2 – New Vehicle Acquisitions

The table below summarizes the application of the Act on a department/agency basis. The information reported is the result of consultation with each department and agency.

Departments and agencies included in either schedule I, I.1 or II of the FAA that *did not* acquire any new vehicles during the 1997–98 fiscal year are not included in this list; however, they, too, are in compliance with the Act.

Department or Agency	Number of Vehicles Acquired	Vehicles Cost-Effective for ATF Use	Vehicles Cost-effective and Operationally Feasible for ATF Use	Actual Number of ATF Vehicles Acquired
SCHEDULE I				
Agriculture and Agri-Food Canada	93	1	0	0
Department of Canadian Heritage	59	10	10	11
Citizenship and Immigration Canada	12	2	0	0
Department of Finance Canada	1	0	0	0
Fisheries and Oceans	80	13	0	0
Health Canada	56	8	0	0
Human Resources Development Canada	40	4	0	0
Indian and Northern Affairs Canada	32	2	0	0
Industry Canada	26	6	0	0
Department of Justice Canada	1	0	0	0
National Defence	240	60	10	10
Revenue Canada	35	8	0	1

Department or Agency	Number of Vehicles Acquired	Vehicles Cost-Effective for ATF Use	Vehicles Cost-effective and Operationally Feasible for ATF Use	Actual Number of ATF Vehicles Acquired
Natural Resources Canada	26	7	7	11
Public Works and Government Services Canada	22	2	0	2
Environment Canada	42	13	4	8
Solicitor General Canada	1	0	0	0
Transport Canada	91	18	9	7
Veterans Affairs Canada	3	0	0	0
Western Economic Diversification Canada	1	0	0	0
Totals for Schedule I	**861**	**154**	**40**	**50**

Department or Agency	Number of Vehicles Acquired	Vehicles Cost-Effective for ATF Use	Vehicles Cost-effective and Operationally Feasible for ATF Use	Actual Number of ATF Vehicles Acquired
SCHEDULE I.1				
Atlantic Canada Opportunities Agency	3	0	0	0
Canadian Space Agency	1	0	0	0
Correctional Service Canada	100	33	3	9
Canada Economic Development for Regions of Québec	3	0	0	0
Canadian Human Rights Commission	1	0	0	0
National Parole Board	1	1	0	0
Privy Council Office	4	4	1	0
Royal Canadian Mounted Police	1,195	268	1	72
Statistics Canada	1	0	0	0
Totals for Schedule I.1	**1,309**	**306**	**5**	**81**

Department or Agency	Number of Vehicles Acquired	Vehicles Cost-Effective for ATF Use	Vehicles Cost-effective and Operationally Feasible for ATF Use	Actual Number of ATF Vehicles Acquired
SCHEDULE II				
Atomic Energy Control Board	4	0	0	0
Canadian Food Inspection Agency	66	7	0	0
Medical Research Council of Canada	1	0	0	0
National Research Council Canada	7	0	0	0
Transportation Safety Board of Canada	2	0	0	0
Totals for Schedule II	**80**	**7**	**0**	**0**
Totals for All Schedules	**2,250**	**467**	**45**	**131**

Annex 3 – Definitions of Table Headings

Department or Agency

All federal government bodies (departments and agencies) named in schedules I, I.1 and II of the *Financial Administration Act* that made vehicle acquisitions during the 1997–98 fiscal year.

Number of Vehicles Acquired

The total number of vehicles acquired by the departments and/or agencies during the 1997–98 fiscal year.

Vehicles Cost-effective for ATF Use

Number of 1997–98 vehicle acquisitions considered to be no more costly to operate on ATF in comparison to a conventional fuel.

Vehicles Cost-effective and Operationally Feasible for ATF Use

Number of 1997–98 vehicle acquisitions considered to be no more costly to operate on ATF in comparison to a conventional fuel *and* able to fulfill its operational duties while using ATF.

Actual Number of ATF Vehicles Acquired

The actual number of 1997–98 vehicle acquisitions that are capable of operating on ATF.

50% Target - Required Acquisitions as per Act

Total number of 1997–98 vehicle acquisitions that should be capable of operating on ATF as per the *Alternative Fuels Act*.

For the 1997–98 fiscal year, the Act requires that 50 per cent of all vehicle acquisitions that are determined to be both cost-effective and operationally feasible for ATF use should be capable of operating on ATF.