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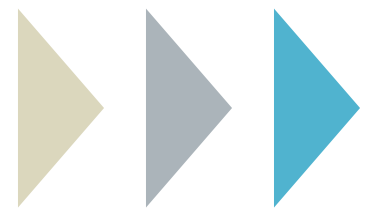
ANNUAL REPORT TO PARLIAMENT



Report on the Application of the *Alternative Fuels Act*

Fiscal Year 2006-07

annual
report



Canada

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Report on the Application
of the *Alternative Fuels Act*

Fiscal Year 2006-07



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 2006–07, pursuant to the *Alternative Fuels Act*.

The paper version was signed by
The Honourable Vic Toews, P.C., Q.C., M.P.
President of the Treasury Board

Table of Contents

Executive Summary	i
1. Introduction	1
1.1 <i>Alternative Fuels Act</i>	1
2. Compliance with the <i>Alternative Fuels Act</i>	1
2.1 New vehicle acquisitions	2
2.2 Use of ATF in the federal fleet	3
2.3 Use of lower emission vehicles in the federal fleet	3
3. Conclusion	5
Appendix 1: Terminology	6
Appendix 2: New Vehicle Acquisitions	8

Executive Summary

Annual Report on the Application of the Alternative Fuels Act

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

This is the tenth annual report on the application of the AFA.

The Alternative Fuels Act

The purpose of the AFA is to accelerate the use in Canada of alternative transportation fuels (ATF) in motor vehicles to reduce the emission of carbon dioxide and other greenhouse gases, thereby lessening dependence on petroleum-based fuels for transportation. These ATF include ethanol, methanol, propane gas, natural gas, hydrogen, or electricity, which must be used as a sole source of direct propulsion energy.

Compliance with the Alternative Fuels Act

For the tenth consecutive year, the federal government, through the activities of the federal bodies named in schedules I, I.1, and II of the FAA, fully complied with and exceeded AFA requirements for vehicle acquisitions. The cost-effectiveness and operational feasibility requirements for eligible ATF vehicles severely restrict the acquisition number, to the extent that the target in 2006–07 for ATF vehicles was nil. Nevertheless, the federal government acquired 354 ATF vehicles—each one capable of operating on E85 ethanol fuel.

The availability of ATF vehicles and associated ATF infrastructure (e.g. fuelling stations) has not yet materialized to the extent needed to make greater use of ATF vehicles. Technological and commercial developments over time should alleviate the cost-effectiveness and operational constraints that currently restrict their use.

It is important to note that expanding the use of ATF and ATF vehicles is but one of many measures taken by the federal government to reduce harmful emissions from its fleet. For example, fuel consumption and greenhouse gas (GHG) emissions are part of the evaluation criteria of bids for federal vehicles, giving an advantage to fuel-efficient vehicles. Modernization of the federal fleet, with newer, cleaner, and more fuel-efficient vehicles replacing older-technology vehicles, has also led to a significant reduction in GHG and harmful ground-level emissions.

1. Introduction

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

This is the tenth annual report on the application of the AFA.

1.1 *Alternative Fuels Act*

The AFA received Royal Assent on June 22, 1995, and took effect on April 1, 1997. The purpose of the AFA is to accelerate the use in Canada of alternative transportation fuels (ATF) in motor vehicles to reduce the emission of carbon dioxide and other greenhouse gases, thereby lessening dependence on petroleum-based fuels for transportation. These ATF include ethanol, methanol, propane gas, natural gas, hydrogen, or electricity, which must be used as a sole source of direct propulsion energy.

The AFA and its regulations require that, where cost-effective and operationally feasible, 75 per cent of all motor vehicles operated by federal departments and agencies use ATF. More specifically, the AFA requires that:

- ▶ of the portion of newly acquired vehicles deemed both cost-effective and operationally feasible to run on ATF, 75 per cent must be physically capable of using these fuels; and
- ▶ where it is cost-effective and operationally feasible, a federal body shall use an ATF in the operation of any motor vehicle capable of operating on such a fuel.

2. Compliance with the *Alternative Fuels Act*

The Treasury Board *Guide to Fleet Management* contains procedural requirements to ensure effective application of the AFA and its regulations; and provide guidance to departments and agencies to help them meet their AFA obligations.

To determine if ATF would be cost-effective and operationally feasible, the Guide requires departments and agencies to review each newly acquired vehicle by assessing its estimated life-cycle cost and primary operational tasks. If life-cycle costs are found to be lower for an ATF vehicle than one powered by conventional fuel, and if it can fulfill its stated operational requirements, an ATF vehicle will be considered for purchase. At least 75 per cent of these vehicles will be acquired in accordance with the AFA.

The federal bodies, named in schedules I, I.1, and II of the FAA, successfully acquired a total of 354 ATF vehicles during 2006–07. This far exceeded the nil target established after the application of AFA requirements.

Limited availability of ATF has limited its use in many cases.

Further details on AFA compliance are provided below.

2.1 New vehicle acquisitions

In fiscal year, 2006–07, although no new factory-produced propane or natural gas vehicles were available in Canada, there were kits to convert regular vehicles for ATF use. New ethanol 85/gasoline (E85) flexible fuel vehicles were also available, but not in all vehicle classes.

Cost-effectiveness constraints worked against the adoption of ATF and acquisition of ATF vehicles during 2006–07.

- ▶ Compared to similar classes of gasoline vehicles, premiums to acquire factory-produced E85 vehicles ranged up to \$1,819 per vehicle. The cost per litre of E85 ethanol was approximately 6 per cent higher than regular gasoline and, for those vehicles using it, consumption was approximately 30 per cent higher than for conventional gasoline vehicles.
- ▶ During 2006–07, the federal government did not contract with suppliers of after-market conversion kits. The effectiveness and quality of conversion kits remain questionable and testing has sometimes revealed higher emissions than from a gasoline vehicle. Also, some departments noted that the limited number of approved warranty service facilities for converted vehicles resulted in higher maintenance and repair costs. For these reasons, no federal vehicles were converted to ATF use during 2006–07.

Significant operational constraints also reduced the viability of using ATF and ATF vehicles in the federal fleet:

- ▶ The only fuelling station to offer E85 fuel commercially in Canada (Ottawa, Ontario) no longer does. Outside of urban areas, supplies of propane and natural gas were limited and the operating hours of suppliers were often restricted.
- ▶ Some jurisdictions restrict the use of propane vehicles in certain areas, e.g. underground parking garages and some airport tarmacs. The installation of ATF tanks in vehicles sometimes affects their operational capabilities because it reduces available cargo space.

These factors resulted in a nil target for ATF vehicle acquisitions under the AFA for 2006–07.

Of the 4,648 new vehicles acquired in total during the 2006–07, 354 were ATF vehicles. There were several reasons for this:

- ▶ Some manufacturers made engines that were compatible with E85 fuel as a standard feature in certain models.
- ▶ In 2006–07, the Federal Fleet Initiative program, administered by Natural Resources Canada, offered financial incentives to departments and agencies to increase ATF use and to reduce emissions in federal fleet operations. Adding these incentives made it cost-effective and operationally feasible for an estimated 176 vehicles to operate on ATF.
- ▶ Fourteen E85 ethanol fuelling tanks have been installed on federal government sites across Canada—this increases the viability of ATF usage in the regions where these tanks are installed.

2.2 Use of ATF in the federal fleet

The federal government's 48 natural gas vehicles (down from 106 in 2005–06) consumed approximately 86,562 kg of natural gas, and its 55 propane vehicles (down from 71 in 2005–06) consumed approximately 169,297 litres of propane.

While only a portion of the federal government's 2,042 E85 flexible fuel vehicles had immediate access to E85 fuel during 2006–07, those that had access to this fuel consumed approximately 752,154 litres.

During 2006–07, the federal government operated approximately 31 electric vehicles, most of them off-road utility vehicles outside the scope of the AFA. Although data on their energy consumption is not available, it is important to note that many of these electric vehicles replaced conventional fuel-burning trucks and equipment.

2.3 Use of lower emission vehicles in the federal fleet

Hybrid gasoline-electric vehicles are not considered ATF vehicles under the AFA and, as such, are not included in the 354 vehicles discussed in section 2.1 of this report. Because many hybrid gasoline-electric vehicles meet federal travel and operational needs, the federal government ordered 385 during 2006–07 (*see table next page*), and now operates an estimated total of 865 of these vehicles.

Department or Agency	Number of Hybrid gas-electric vehicles acquired in 2006–07
Agriculture and Agri-Food Canada	2
Atlantic Canada Opportunities Agency	3
Canada Border Services Agency	3
Canada Revenue Agency	6
Canadian Food Inspection Agency	207
Canadian Heritage	1
Canadian Institutes of Health Research	2
Citizenship and Immigration Canada	1
Correctional Service Canada	19
Environment Canada	19
Fisheries and Oceans Canada	19
Foreign Affairs and International Trade Canada	4
Health Canada	1
Human Resources and Skills Development Canada	1
Indian and Northern Affairs Canada	3
Industry Canada	1
National Defence	8
National Research Council Canada	1
Natural Resources Canada	3
Office of the Auditor General	1
Parks Canada	5
Privy Council Office	1
Public Works and Government Services Canada	13
Royal Canadian Mounted Police	31
Transport Canada	28
Treasury Board of Canada Secretariat	1
Western Economic Diversification Canada	1
Total	385

3. Conclusion

During 2006–07, the federal government, through the activities of the federal bodies named in schedules I, I.1, and II of the FAA, fully complied with AFA requirements governing vehicle acquisition. However, a limited availability of alternative fuels and lack of supporting infrastructure during the same period resulted in a limited increase in their overall use from that of 2005–06.

The availability of ATF vehicles and associated infrastructure (e.g. fuelling stations) has not yet materialized enough to make greater use of ATF vehicles. Technological and commercial developments over time should alleviate the cost-effectiveness and operational-feasibility constraints that restrict their use.

It is important to note that expanding the use of ATF and ATF vehicles is but one of many measures taken by the federal government to reduce harmful emissions from its fleet. For example, fuel consumption and greenhouse gas (GHG) emissions are part of the evaluation criteria of bids for federal vehicles, giving an advantage to fuel-efficient vehicles. Modernization of the federal fleet, with newer, cleaner, and more fuel-efficient vehicles replacing older-technology vehicles, has also led to a significant reduction in GHG and harmful ground-level emissions.

Appendix 1: Terminology

The following section provides definitions of the terms frequently used in this report:

Motor vehicle

For the purposes of reporting on the AFA, *motor vehicle* is defined to include automobiles, passenger vans, light- or medium-duty trucks, and buses.

Alternative transportation fuel

Under the AFA, *alternative transportation fuel*, or ATF, must include, but is not limited to, ethanol, methanol, propane gas, natural gas, hydrogen, or electricity, and these must be used as a sole source of direct propulsion energy.

For the purpose of acquiring motor vehicles, the *Alternative Fuels Regulations* expand the definition of ATF given above to include blended fuels when an ATF (as defined above) makes up at least 50 per cent of the blend. Flexible fuel and bi-fuel vehicles are also considered to be ATF vehicles for the purposes of acquiring motor vehicles.

For the purposes of using ATF, the *Alternative Fuels Regulations* also expand on the definition of ATF given above to include biodiesel and blended fuels that include any amount of the approved ATF.

Flexible fuel vehicle

A *flexible fuel vehicle* is one with a single fuel system that operates on one of two different fuels alone or on a blend of the two (e.g., an E85 vehicle can operate on gasoline alone or on any blend of gasoline and ethanol, to a maximum of 85 per cent ethanol).

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

Operationally feasible

ATF use is considered to be *operationally feasible* when it can be demonstrated that the vehicle will be able to fulfill its primary operational tasks.

The definition of operational feasibility will vary across departments and agencies according to a wide range of variables, including the following: the specific travel patterns of each vehicle, the mandate of the department or agency, the availability of alternative fuels wherever the vehicle will travel, the local laws (or by-laws), the vehicle performance requirements, and the vehicle availability or the availability of a suitable conversion kit.

Appendix 2: New Vehicle Acquisitions

The table below summarizes new vehicle acquisitions under the application of the AFA for 2006–07, by department or agency. The information reported is the result of consultations with each department and agency.

Departments and agencies included in schedules I, I.1, and II of the FAA, but not listed below, *did not* acquire any new vehicles during 2006–07.

Department or Agency	Total Number of vehicles acquired	Number of ATF vehicles acquired
Schedule I		
Agriculture and Agri-Food Canada	88	41
Canadian Heritage	2	1
Citizenship and Immigration Canada	4	2
Department of Finance Canada	1	1
Department of Justice Canada	1	0
Environment Canada	105	23
Fisheries and Oceans Canada	248	31
Foreign Affairs and International Trade Canada	10	6
Health Canada	61	9
Human Resources and Skills Development Canada	2	1
Indian and Northern Affairs Canada	16	7
Industry Canada	38	11
National Defence	1398	23
Natural Resources Canada	30	12
Public Safety and Emergency Preparedness Canada	1	1
Public Works and Government Services Canada	37	9
Transport Canada	60	9
Treasury Board of Canada Secretariat	1	0
Veteran Affairs Canada	2	0
Western Economic Diversification Canada	1	0
Totals for Schedule I	2106	187

Department or Agency	Total Number of vehicles acquired	Number of ATF vehicles acquired
Schedule I.1		
Atlantic Canada Opportunities Agency	3	0
Canada Firearms Centre	1	1
Canadian Grain Commission	1	1
Canadian International Development Agency	1	0
Correctional Service of Canada	152	67
Courts Administration Services	1	1
Office of the Auditor General	1	0
Office of the Chief Electoral Officer	2	2
Office of the Commissioner of Official Languages	2	0
Office of the Governor General	1	0
Privy Council Office	3	2
Royal Canadian Mounted Police	1988	59
Statistics Canada	2	0
Totals for Schedule I.1	2158	133

Department or Agency	Total Number of vehicles acquired	Number of ATF vehicles acquired
Schedule II		
Canada Border Services Agency	42	11
Canada Revenue Agency	24	2
Canadian Food Inspection Agency	271	19
Canadian Institutes of Health Research	2	0
Canadian Nuclear Safety Commission	2	0
National Research Council Canada	17	2
Parks Canada	26	0
Totals for Schedule II	384	34
Total for all Schedules	4648	354