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Evaluation of the Automotive Innovation Fund

Final Report

October 2012

Recommended for approval to the Deputy Minister by the
Departmental Evaluation Committee on October 26, 2012

Approved by the Deputy Minister on November 5, 2012

Canada 

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LIST OF ACRONYMS USED IN THIS REPORT

Acronym	Meaning
AIF	Automotive Innovation Fund
ATIB	Automotive and Transportation Industries Branch
APC	Automotive Partnership Canada
CA	Contribution Agreement
FMCC	Ford Motor Company of Canada
IC	Industry Canada
IRAP	Industrial Research Assistance Program
ITO	Information Technologies Office
MOU	Memorandum of Understanding
PAA	Program Activity Architecture
PWGSC	Public Works and Government Services Canada
OAIS	Ontario Automotive Investment Strategy
OEMs	Original Equipment Manufacturers
PERDC	Powertrain Engineering Research and Development Centre
R&D	Research and Development
S&T	Science and Technology
SO	Strategic Outcome
Ts and Cs	Terms and Conditions

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EXECUTIVE SUMMARY

Program Overview

The Automotive Innovation Fund (AIF), announced in Budget 2008, was established to provide \$250 million in repayable contributions over five years to support strategic, large-scale research and development projects in the automotive sector in developing innovative, greener and more fuel-efficient vehicles. The Fund is delivered and administered by the Automotive and Transportation Industries Branch (ATIB) of Industry Canada (IC).

Evaluation Purpose and Methodology

In accordance with the Treasury Board *Policy on Evaluation* and the *Directive on the Evaluation Function*, the purpose of this evaluation was to assess the core issues of relevance and performance of the AIF. The evaluation findings and conclusions are based on the analysis of multiple lines of evidence. The methodology included a document review, an administrative data review, interviews, case studies, and a jurisdictional review.

Findings

Relevance

The federal government, like other governments around the world, has a long history of encouraging investment in Canada's automotive sector due to its strategic importance to the Canadian economy. Should Canada wish to maintain and/or grow its automotive footprint, there is a need for a program to enable the sector to invest to meet environmental challenges, respond to changing consumer demand, and compete effectively in a globally competitive environment.

The AIF, and the projects it has funded to date, are consistent with federal roles and responsibilities as outlined in the *Department of Industry Act*, and remains consistent with federal and departmental priorities.

Performance

The AIF has largely achieved its immediate outcomes. There is awareness and understanding of the program within the target audience; proposals submitted align with program objectives; duplication between the AIF and Ontario application processes has been minimized; and, recipients have leveraged funding from other sources and are undertaking R&D work. While the AIF has also been successful in attracting and retaining automotive product and R&D mandates from firms operating in Canada, it has not attracted new mandates from companies outside of Canada. Evidence suggests that factors beyond financial incentives are considered by companies when making such decisions.

AIF is on track to achieve its intermediate outcomes including increasing or maintaining economic activity, supporting new or expanded flexible manufacturing facilities, and developing/implementing innovative, fuel efficient technologies or processes. Funded projects

are also helping to enhance R&D capacity in Canada, and realizing environmental benefits. Finally, the program is helping to secure jobs in the automotive sector, as proponents are reporting that projects have exceeded their original employment projections.

The design and delivery of the AIF has been a significant contributor to the success of the program and how it has been received by beneficiaries. This includes the level of knowledge among the program staff and the flexibility in moving funding between fiscal years and project activities. However, interviewees also identified some barriers to the success of the program, most notably the length of the application and approval process, and the AIF's perceived lower rate of contribution (i.e., as a proportion of the total project value) when compared to other jurisdictions.

Evidence suggests that the AIF is operating in a cost-efficient manner and is managed with cost-efficiency in mind. The program's five-year operating costs are expected to be approximately \$1 million less than originally anticipated. Furthermore, repayable contributions appear to be an appropriate mechanism for delivering the AIF. The evaluation did not find conclusive evidence that other delivery models would be more efficient in achieving the program's objectives.

Recommendations

The following recommendations are based on the above findings:

Recommendation 1: The program should consider developing service standards to improve the timeliness of the application and approval process.

Recommendation 2: The program should ensure that the AIF's rate of contribution (i.e., as a proportion of the total project value) continues to reflect program objectives in the context of a highly competitive, international automotive sector.

1.0 INTRODUCTION

This report presents the results of an evaluation of the relevance and performance of the Automotive Innovation Fund (AIF). The report is organized into four sections:

- Section 1 provides the program context and a profile of AIF;
- Section 2 sets out the evaluation methodology along with a discussion of data limitations;
- Section 3 presents the findings pertaining to the evaluation issues of relevance and performance; and,
- Section 4 summarizes the study's conclusions and provides recommendations.

1.1 Program Context

The automotive industry is Canada's largest manufacturing sector, a key driver of innovation and a major contributor to the national economy. In 2007, the year before the AIF was launched, the automotive sector represented 14 percent of manufacturing GDP in Canada, 23 percent of total Canadian manufacturing exports and employed over 150,000 Canadians in a capital-intensive, high productivity industry.

At the time, the global automotive industry was being reshaped by changing market conditions. Demand was increasing in emerging markets, while in North America and Europe demand had stabilized and competition had increased. Several factors had recently changed Canada's competitive position, including: the rapid increase in the value of the Canadian dollar compared to the US, with an increase of over 50% over the previous five years; major reductions in the cost of hourly wages in the US as a result of changes to labour contracts; increased border security; differing environmental and safety regulations in the US and Canada affecting automobile production; and, generous financial incentives offered by US states seeking to attract automotive capital investments.

In addition, the automotive industry had to take into account changes in consumer demand due to increases in fuel and energy costs and pressures for environmental sustainability. As a result, the automotive industry was largely focused on research and development (R&D) and investments related to innovative, more fuel efficient and environmentally friendlier vehicles and production technology.

Within this context, the AIF aims to maintain a strong, competitive Canadian automotive industry by supporting major automotive innovation and R&D initiatives to develop and build greener, more fuel efficient vehicles; and, where possible, encouraging investments in state-of-the-art, energy efficient assembly and powertrain facilities that retain or bring new plants, products and R&D mandates to Canada.

1.2 Program Overview

The AIF, announced in Budget 2008, was established to provide \$250 million over five years to "support strategic, large-scale research and development projects in the automotive sector in

developing innovative, greener and more fuel-efficient vehicles.” The Fund is delivered by the Automotive and Transportation Industries Branch (ATIB) of Industry Canada (IC).

The objectives of the AIF are to:

- Assist the building of automotive R&D capacity in Canada and secure knowledge-based jobs;
- Enhance the government’s S&T and environmental agendas;
- Support projects aimed at the development and/or implementation of innovative, fuel efficient technologies and processes;
- Promote long-term economic benefit to Canada including significant job creation/ retention; and,
- Serve as a catalyst for private sector investments fostering Canadian competitiveness.

Support under the AIF is provided for major automotive innovation and R&D initiatives to develop and build greener, more fuel-efficient vehicles, inclusive of:

- New product development (e.g., advanced emissions technologies, energy efficient engines and transmissions, advanced materials, including engineered plastics, light weight components and materials);
- Leading edge engineering and design, and prototype development;
- Advanced product testing with a view to ensuring cleaner, more efficient automotive performance and reduced greenhouse gases (GHGs);
- The development of new production methods and process technologies, including advanced flexible manufacturing techniques;
- New or expanded facilities to produce leading-edge and more energy efficient vehicles and powertrains;
- Substantive investments in new flexible manufacturing processes; and,
- Introduction of other transformative new production technologies to substantially increase productivity and efficiency (e.g. robotics, advanced IT systems, etc.).

1.3 Program Resources

The AIF has a total budget of \$250 million over five years (2008-2009 to 2012-2013). While the majority of funds are used to provide repayable contributions to projects, a small portion is used to administer the AIF. The allocation of AIF program resources are shown in Table 1.

Table 1: Overview of AIF Resources (\$ 000)						
Category	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	Total
Operating Expenditures*	\$1,000	\$1,250	\$1,450	\$1,350	\$1,350	\$6,400
Grants and Contributions	\$9,000	\$68,750	\$68,550	\$68,650	\$28,650	\$243,600
Total	\$10,000	\$70,000	\$70,000	\$70,000	\$30,000	\$250,000

* Includes Salaries, Operating and Maintenance, and Employee Benefit Plans and Accommodations

1.4 Program Design and Delivery

The AIF was designed to provide repayable contributions to eligible recipients working in the automotive industry. Companies are required to submit a proposal that outlines their need for funding, along with how they meet the eligibility requirements of the program. Eligible recipients must be incorporated under Canadian laws and must submit a proposal associated with automotive innovation and R&D initiatives with an investment valued at more than \$75 million over five years. It should be noted that the original threshold for investment by proponents of \$300 million was lowered in 2009, when the economic recession was limiting companies' ability to invest in strategic R&D. Companies are able to submit a proposal at any time during the five-year window of the program, subject to the availability of funding.

Upon submission of the proposal, AIF program staff undertake a due diligence assessment of the project. Proposed projects are assessed against eligibility criteria with respect to industrial research, pre-competitive development, and technology adaption and adoption. If the proposal meets these criteria, IC will then assess the business case to determine if it will provide innovation, environmental and economic benefits as well as the company's capability to achieve the stated objectives. This assessment considers the feasibility of the project, the company's ability to deliver on the benefits, potential risks associated with the projects, and the likelihood of achieving the expected benefits.

Once this assessment has been completed, and if the proposal has been approved, AIF and the company enter into negotiations for the contribution agreement (CA). The CA includes the project details, the amount of the repayable contribution, the repayment schedule, conditions of disbursement, annual appropriations, reporting and audit requirements, and events and remedies of default. The length of time required to complete the assessment phases and negotiations varies with each proponent.

After the CA has been signed, the company is eligible to start filing claims against expenses incurred for the approved projects. For the duration of the project, the company is required to submit claims, annual reports, and other documentation as required in the CA. At the conclusion of the project, the company will then enter into the repayment period.

1.5 AIF Recipients

Since 2009, AIF has approved up to \$227,430,000 in repayable contributions to projects from four recipients as identified in Table 2.

Table 2: AIF Project by Recipients			
	Recipient	Repayable Contribution (\$)	Date of Announcement
1.	Ford Motor Company of Canada (Ford)	Up to \$80,000,000	September 2008
2.	Linamar Corporation (Linamar)	Up to \$54,800,000	September 2009
3.	Toyota Motor Manufacturing of Canada Inc. (Toyota)	Up to \$70,840,000	July 2011
4.	Magna International (Magna)	Up to \$21,790,000	February 2012
		Up to \$227,430,000	

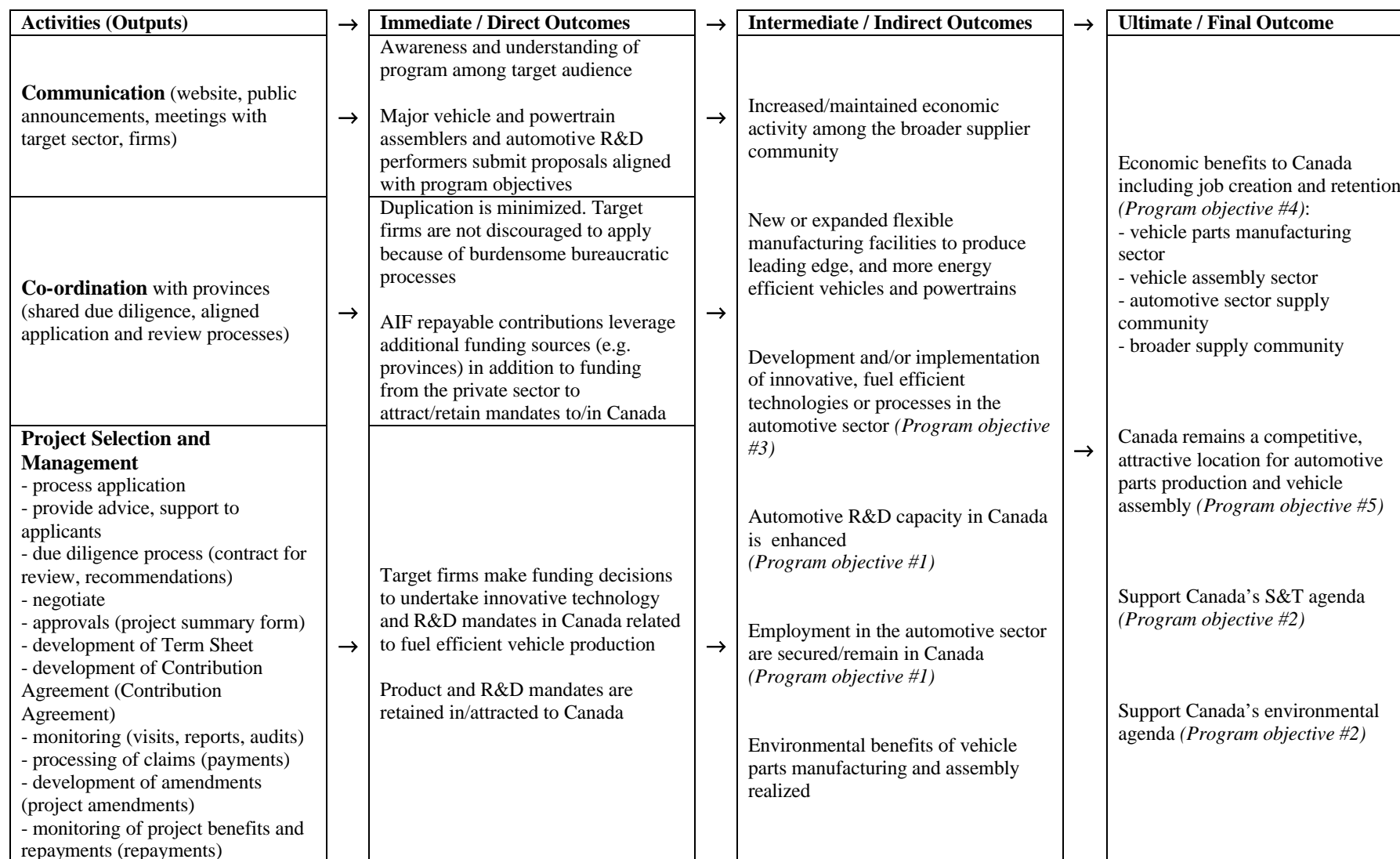
1.6 Expected Results

The logic model in Figure 1 was developed in 2008 as part of the AIF's Results-Based Management Accountability Framework and Risk-Based Audit Framework. The logic model outlines the program's inputs, activities, and outputs, as well as the intended immediate, intermediate, and longer-term outcomes.

Repayable contributions provided by AIF are expected to encourage recipients to undertake R&D activities in innovative technologies that would develop and build greener, more fuel efficient vehicles and invest in state-of-the-art, energy efficient assembly and powertrain facilities that would retain or bring new plants, products and R&D mandates to Canada. Additionally, it was expected that companies would leverage other funding sources to support their initiatives, including provincial government funding and their own funding.

These investments would help maintain a strong, competitive Canadian automotive industry that contributes to economic growth, job creation, and continues to attract new and maintain existing facilities for automotive parts production and vehicle assembly.

Figure 1: AIF Logic Model



2.0 METHODOLOGY

This section provides information on the evaluation approach, objective and scope, the specific evaluation issues and questions that were addressed, the data collection methods, and data limitations for the evaluation.

2.1 Evaluation Approach

The evaluation was managed by Industry Canada, Audit and Evaluation Branch (AEB). Goss Gilroy Inc. was contracted to conduct the evaluation. A resource from AEB was embedded in the evaluation team and participated in the conduct of select methodologies.

2.2 Objective and Scope

An evaluation of the AIF is required under section 42.1 of the *Financial Administration Act*. In accordance with the Treasury Board *Policy on Evaluation* and *Directive on the Evaluation Function*, the purpose of this evaluation was to assess the core evaluation issues of relevance and performance.

The first CA under the AIF was not signed until 2009. As such, in assessing the program's performance, the evaluation focused on the extent to which the AIF has achieved its immediate outcomes and is on track to achieving its intermediate outcomes.

The evaluation covered the period of May 2008 to September 2012.

2.3 Evaluation Issues and Questions

Based on the Integrated Results-Based Management and Accountability Framework and Risk-Based Audit Framework the following questions were addressed in the evaluation:

Relevance

- Is there a continuing need for the AIF?
- Is the AIF consistent with federal roles and responsibilities?
- Does the AIF continue to be consistent with government-wide and departmental priorities?

Performance

- What have been the outcomes of projects to date (based on activities and project objectives identified in Contribution Agreements)?
- To what extent have the immediate outcomes of the AIF been achieved?
- To what extent is the AIF on track to achieving intermediate outcomes?
- What factors have facilitated the success of the program? What have been some of the barriers to success?

- Is the AIF operating in a cost efficient manner?
- Are the most appropriate and efficient means being used to achieve objectives relative to alternative delivery approaches?

2.4 Data Collection Methods

Multiple lines of evidence were used to address all evaluation questions. The data collection methods included a document review, administrative data review, interviews, case studies, and a jurisdictional review.

Document Review

Program and departmental documents were reviewed with a view to answering many of the evaluation questions. Documents reviewed included foundation documents (such as Treasury Board Submissions), project proposals, annual reports, claims submissions, and site visit reports.

Administrative Data Review

Where possible, administrative data maintained by ATIB was reviewed as a data source for select evaluation questions related to performance.

Interviews

Interviews were conducted to address issues of relevance and performance. Individuals were selected based on their specialized knowledge of the AIF or of the operating environment for the program. A total of 16 interviews were conducted:

- IC AIF program representatives (6)
- Other government stakeholders (5)
- Experts (2)
- Participant firms (2)
- Non-applicant target firms (1)

Case studies

Case studies were undertaken with a view to better understand the impact of the funding relative to other sources of funding (i.e., to explore issues related to incrementality and attribution), to explore the characteristics of successful projects and barriers to success, and to validate the achievement of expected outcomes at the project level. While the main focus for these case studies was to assess the performance of the AIF, participants were also asked to comment on the ongoing relevance of the Fund.

The two CAs signed prior to 2012 were included as case studies. Each case study included a review of the project documentation, interviews with key AIF-funded project personnel employed by the recipient, and a site visit to observe concrete illustrations of new technologies and facilities.

Jurisdictional Review

A review of other jurisdictions with initiatives targeted at attracting automotive R&D investments (ideally with an environmental focus) was conducted to allow for a comparison of the AIF with its competitors. The jurisdictions reviewed included: United States, United Kingdom, and Australia. Mexico was originally included in the review but was dropped from the analysis, due to a lack of public information available for comparative purposes.

The review consisted of a document and website review to gather descriptive information about the programs.

2.5 Limitations

The following were the limitations to the methodology:

- *Small Sample Size:* The small sample size of funded projects (with only two CAs signed before 2012) limited the pool from which to glean outcomes and the extent to which findings could be generalized. To address this limitation, efforts were made during the evaluation to understand the drivers and barriers to success in order to generate conclusions about the overall effectiveness of the Fund.
- *Recipient Discretion:* Due to the highly competitive nature of the automotive industry, corporations were reluctant to discuss matters that might disclose commercially sensitive information and/or decrease their competitiveness. For this reason, the evaluation is limited to reporting at a generic level and does not identify the specifics regarding the AIF-funded project or technologies.
- *Availability of Jurisdictional Information:* Not only is the automotive industry highly competitive between corporations, but countries also compete against one another for private sector investments in their jurisdictions. The jurisdictional review found that other jurisdictions were reluctant to provide specifics of their approaches in publicly available documents. Consequently, the review focused on jurisdictions for which public information was available and also relied on case studies and interviews for further information on incentives provided in other jurisdictions.
- *Self Reporting by Recipients on Employment:* While recipients under the AIF report on jobs created under their projects, the methodology for calculating this figure varies between firms. As such, the report speaks of job creation in general, and does not provide specific job figures for projects.

3.0 FINDINGS

3.1 Relevance

3.1.1 Is there a continued need for the AIF?

Key Findings: The federal government, like other governments around the world, has a long history of encouraging investment in Canada's automotive sector due to its strategic importance to the Canadian economy. Should Canada wish to maintain and/or grow its automotive footprint, there is a need for a program to enable the sector to invest to meet environmental challenges, respond to changing consumer demand, and compete effectively in a globally competitive environment.

The federal government, like other governments around the world, has a long history of encouraging investment in Canada's automotive sector. Such investments produce public benefits due to the auto sector's strategic importance to the Canadian economy, including the high multiplier effect of manufacturing-based jobs. Automotive is Canada's largest manufacturing sector, representing 12% of total manufacturing output and 20% of manufactured exports. Industry Canada estimates that in 2011, the automotive industry employed more than 109,000 Canadians directly, and 332,000 indirectly.¹

As part of this evaluation, interviewees from across stakeholder groups identified two key challenges facing Canada's automotive sector:

- **Changing environmental standards:** Environmental concerns continue to drive the need to produce fuel-efficient vehicles and introduce energy efficient manufacturing processes. In 2009 the United States (US) Corporate Average Fuel Economy (CAFE) introduced more stringent fuel economy standards that aim to improve the average fuel economy of cars and light trucks. Canada has harmonized its regulations with the US and auto manufacturers in Canada have had to take steps to meet these new requirements. Investments are required to help meet these changing environmental standards, and interviewees from a variety of stakeholder groups noted the need for government to support industry in meeting these federal requirements.
- **Shifting consumer demands:** Interviewees also spoke about the continued challenges the sector faces in meeting changing consumer demands. Consumers increasingly demand more fuel-efficiency across all makes and models of vehicles. By undertaking R&D, recipients are able to develop new technologies, materials and processes that will enhance fuel efficiency. Additionally, the introduction of flexible manufacturing equipment and processes makes it easier for companies to turn over assembly lines to produce different components that respond to changes in consumer demand.

¹ Industry Canada, "Harper Government Invest in Jobs and Growth With Next-Generation Auto R&D", Accessed May 31, 2012, <http://www.ic.gc.ca/eic/site/ic1.nsf/eng/07063.html>.

In addition to these challenges, global competition for product and R&D mandates is fierce and jurisdictions around the world have programs in place to encourage investment in their areas. In 2008, the United States launched its \$25 billion (US) Advanced Technology Vehicles Manufacturing Loan Program (ATVMMLP). The program provides loan guarantees of up to 80% of the total costs of projects aimed at reequipping, expanding, or establishing manufacturing facilities to produce fuel-efficient vehicles or vehicle components. Similar programs have also been launched in the United Kingdom (UK) and Australia. In the UK, the Automotive Assistance Program (AAP) provided loan guarantees of up to 75%, while Australia's Green Car Innovation Fund (GCIF) provided grants, at a ratio of one dollar of government funding for every three dollars of funding from the applicant.

Aside from these programs that specifically target greener, more fuel-efficient vehicles, interviewees also suggested that cost-sharing ratios between governments and firms in other jurisdictions can range between 30% and 35%, and in some cases between 45% and 55% to attract new automotive investments. Furthermore, the nature of support in other jurisdictions is moving beyond strictly financial incentives, into areas such as infrastructure improvements and assistance with employee training. Therefore, interviewees from multiple stakeholder groups felt that if Canada wishes to maintain and/or grow its automotive footprint, there is a need for programs such as the AIF to support automotive investments.

3.1.2 Is the AIF consistent with federal roles and responsibilities?

Key Finding: The AIF, and the projects it has funded to date, are consistent with federal roles and responsibilities as outlined in the *Department of Industry Act*. There is no overlap between the AIF and other federally-funded automotive R&D programs, and Ontario programs that support automotive investments complement the AIF program.

IC's mandate relating to the automotive industry is found in the *Department of Industry Act*. The *Act* outlines areas of responsibility of the Minister, which include industry, technology, trade and commerce in Canada.² In undertaking these responsibilities, the Minister is empowered under Section 5 of the *Act* to undertake activities that meet the following objectives:

- strengthen the national economy and promote sustainable development;
- increase the international competitiveness of Canadian industry, goods and services and assist in the adjustment to changing domestic and international conditions;
- encourage the fullest and most efficient and effective development and use of science and technology; and,
- foster and promote science and technology in Canada.

The *Act* enables the Minister to implement national programs, such as the AIF to meet these objectives and promote, assist and provide support services for, and investment in, Canadian

² *Department of Industry Act, Section 4*

industry, goods, services, science and technology.³ One means by which the Minister may implement programs or projects is through grants and contributions.⁴

Each of the four projects under the AIF is an example of the type of initiatives the federal government has the mandate to support. Each project has an R&D component to it, whether it is establishing facilities to undertake innovative research or focusing research on specific automotive components. For example, Ford's Powertrain Engineering Research and Development Centre (PERDC) not only took over a facility previously used for R&D, but has expanded its footprint significantly. Toyota will be using funding to support the development and implementation of innovative, fuel-efficient technologies that will have spin-off benefits for the Cambridge and Woodstock, Ontario economies where Toyota has its manufacturing facilities.

A review of other federally-funded programs for R&D in the automotive industry found no overlap with the AIF. Programs such as Auto21, the Industrial Research Assistance Program (IRAP), and Automotive Partnership Canada (APC) are all focused on enhancing research in Canada's automotive sector, but are geared towards academic-led research and/or small and medium-sized enterprises. Brief descriptions of each program are included below:

- **Auto 21:** Auto 21 is a national research initiative supported by the Government of Canada via the Networks of Centres of Excellence Secretariat. Through public/private sector collaborative research, Auto21 aims to develop an automotive R&D community within Canada to help the sector become more sustainable and globally-competitive. Almost 200 Canadian researchers at 46 universities are partnered with 120 industry and government representatives to undertake research. Auto 21 differs from AIF in that its focus is primarily on supporting research through academic institutions while AIF targets private companies. While these companies may work with universities via their R&D functions, this is not the primary focus of the AIF funding.
- **IRAP:** The mandate of the National Research Council's IRAP is to stimulate wealth creation for Canada through technological innovation by supporting small and medium-sized enterprises in Canada. IRAP provides technical and business advice, financial assistance, access to business information, contacts, and national and international networks to these enterprises as well as funding to support the development and commercialization of technologies in a wide range of sectors. While both AIF and IRAP support technological innovation, IRAP focuses on Small and Medium Enterprises (SMEs) while AIF targets large enterprises that can meet the \$75 million threshold. Further, under IRAP research can be carried out in a wider range of areas than AIF's eligibility criteria allow.
- **APC:** Aims to support significant, collaborative R&D activities that will benefit the entire automotive industry in Canada. All projects receiving funding must be driven by industry needs and involve industrial participation and collaboration with the university and/or government researcher. Those eligible to be industry partners are companies already in the automotive supply chain or a company trying to break into this supply chain. At the conclusion of the project, industry partners must be able to turn the results into commercial

³ *Department of Industry Act, Section 6*

⁴ *Department of Industry Act, Section 14.*

products or services. While both APC and AIF focus on R&D, the APC provides funding to researchers, rather than companies. APC projects are also not limited to certain areas of automotive research as is the case with AIF.

The evaluation also explored the AIF's relationship with provincial programs. Ontario is the only province to have operated a formal program aimed at the automotive sector. The Ontario Automotive Investment Strategy (OAIS) was a five-year, \$500 million program, introduced in April 2004. The OAIS was designed to support large-scale capital projects contributing to the long-term competitiveness of the automotive industry. Under the program, automotive assemblers and Tier One auto parts companies were eligible for government investments in projects of at least \$300 million and/or 300 jobs. Eligible projects involved: corporate innovation, advanced skills training, public infrastructure, improved energy efficiency, and new environmental technologies.⁵

In addition to OAIS, Ontario operates two programs aimed at supporting large-scale investments in the province, both of which would include, but are not specific to, the automotive sector. The Next Generation of Jobs Fund (NGOJF) is a five-year initiative that supports innovative investments in technology, research, development and commercialization across industries and attracts new investments in strategic areas of Ontario's economy.⁶ Projects funded through NGOJF must create or retain 100 jobs or invest \$25 million in Ontario. The Fund provides support in the form of a conditional grant (or loan if requested) and covers up to 15% of total eligible expenses. With its focus on jobs or the value of the investment, the NGOJF complements AIF, which focuses on innovation.

The Advanced Manufacturing Investment Strategy (AMIS), also a five-year initiative, is focused on keeping the highest value-added manufacturing jobs to build a skilled workforce. Projects funded through AMIS must create or retain 50 jobs or invest \$10 million in Ontario. The Strategy provides support in the form of an incentive loan and covers up to 30% of total eligible expenses. However, eligible expenses generally relate to one-time, non-recurring costs, unlike AIF which funds ongoing labour expenses related to the project. As well, AMIS has a \$10 million cap on the province's contribution, compared to AIF which has no cap.

Interviewees indicated that funding offered by Ontario has complemented and continues to complement that of AIF. This is consistent with the AIF Logic Model (see Figure 1, Section 1.6) which notes that AIF funded projects are expected to leverage funding from provincial governments. Some recipients did mention that they feel Ontario programming offers more flexibility due to the province's focus on job creation rather than on specific products or innovations, giving recipients more flexibility in achieving their objectives.

⁵ Government of Ontario, Legislative Assembly of Ontario, <http://www.ontla.on.ca/library/repository/mon/11000/254513.pdf>, accessed October 2, 2011.

⁶ Government of Ontario, Ministry of Economic Development, "Next Generation of Jobs Fund & Advanced Manufacturing Investment Strategy, Helping Ontario Businesses Stay One Step Ahead." Presentation dated March 2009, http://www.choosewindsoressex.com/downloads/data_Next_Generation_of_Jobs_Funds.ppt, accessed on October 3, 2012.

3.1.3 Does the AIF continue to be consistent with government-wide and departmental priorities?

Key Finding: The AIF continues to be consistent with government-wide priorities as outlined in the 2007 and 2011 Speeches from the Throne, Budget 2012, and the 2007 S&T Strategy. Further, AIF is aligned with Industry Canada's priority for advancements in science and technology innovation to strengthen the Canadian economy.

Federal priorities concerning the AIF were originally outlined in the 2007 Speech from the Throne (SFT), which states that the Government will “support Canadian researchers and innovators in developing new ideas and bringing them to the marketplace through Canada’s Science and Technology Strategy.”⁷ This priority was reconfirmed in Budget 2008 when the government announced \$250 million under the AIF to help Canada’s automotive sector “maintain its leadership and competitive advantage...to become more innovative and adapt to new environmental standards.”⁸

The AIF continues to align with federal priorities in the 2011 SFT, which called for:

“...targeted investments to promote and encourage research and development in Canada’s private sector and in our universities, colleges and polytechnics ... support innovation while ensuring that federal investment in research and development is effective and maximizes results for Canadians.”

Budget 2012 re-confirmed the federal commitment “to support strategic innovation projects in key sectors of the Canadian economy, including the automotive, aerospace, forestry and clean technology sectors.”

The AIF is also aligned with the federal government’s 2007 S&T Strategy: *Mobilizing Science and Technology to Canada’s Advantage*. The Strategy focuses on addressing the economic and environmental challenges Canada faces by improving productivity and competitiveness through innovation. Under the Strategy, the government aims to “increase the impact of federal investments, lever university and private-sector strengths, create better learning opportunities for students, and foster research excellence.”⁹ Examples of AIF projects that support the S&T objectives include:

- Magna will undertake extensive R&D in areas of lightweight composite materials, including the use of composites and recyclable materials and automotive components for use in electric and hybrid vehicles. Due to the demand and commercialization of these products, Magna will help to retain and/or create jobs in the automotive supplier sector.

⁷ Government of Canada “Speech from the Throne to Open the Second Session of the 29th Parliament of Canada,” Accessed July 31, 2012 <http://www.pco-bcp.gc.ca/index.asp?lang=eng&page=information&sub=publications&doc=aarchives/sft-ddt/2007-eng.htm>

⁸ Government of Canada “Budget Plan 2008” p 122-123.

⁹ Government of Canada, *Science and Technology Strategy*, (2007) p 14.

- Ford's PERDC is helping to strengthen Canada's knowledge base by attracting high-calibre talent to its facilities to undertake research in addition to centralizing a significant portion of Ford's North American R&D in the one facility.

The AIF falls under Strategic Outcome 2 in IC's Program Activity Architecture (PAA): *Advancements in science and technology knowledge and innovation strengthen the Canadian economy*. This outcome focuses on fostering intelligence, knowledge and innovation of new technologies at the firm-level, recognizing that investments in science and technology are integral in rebuilding Canada's post-recession economy. The program activity to which AIF aligns is Industrial Research and Development Financing. This activity provides support to Canadian businesses to increase R&D activities by investing in innovative projects.¹⁰

AIF is consistent with the strategic outcomes and program activities in IC's PAA. The aim of the AIF is to provide automotive firms with funding to support strategic, large-scale R&D projects to build innovative, greener, and more fuel-efficient vehicles. This is seen in the objectives of the AIF (included in Section 1.2), and the requirement of applicants to demonstrate benefits to Canada, including innovation benefits, environmental benefits and economic benefits. Additionally, AIF identifies eligible project activities (outlined in Section 1.2) that are consistent with the PAA.

3.2 Performance

3.2.1 What have been the outcomes of projects to date (based on activities and project objectives identified in CAs)?

Key Finding: Despite some early delays in project implementation and the impact of the economic downturn in 2008, recipients are producing expected outcomes in line with their contribution agreements.

Evidence suggests recipients who signed CAs prior to 2012 are producing their expected outcomes, despite some early complications. One company cancelled a component of their proposed project due to the economic downturn; however, this possibility was foreseen at the time the project was approved. Another recipient cancelled six activities due to lack of demand and/or technological issues and added others via an amendment to their CA. Despite these set backs, planned activities for both projects are back on schedule.

Ford committed to supporting a new flexible engine assembly plant (Essex Engine Plant) and the creation of the PERDC. The Engine Essex Plant is up and running with new flexible technology, producing four versions of the new 5.0L V8 engines. Due to high market demand, Ford has added a third shift to the plant, creating new jobs in the Windsor area in addition to what was anticipated at the signing of the CA. In addition, PERDC has become a centralized hub of Ford engine research in North America, having consolidated research centres from across Canada and the United States. It is being transformed into a Centre of Excellence for power train innovation, development and testing with 16 test cells for powertrains, hybrid and battery electric tests.

¹⁰ Industry Canada, *Reports on Plans and Priorities, 2012-13*(2012), Accessed July 31, 2012 <http://www.tbs-sct.gc.ca/rpp/2012-2013/inst/dus/dus02-eng.asp#sec22>

PERDC's expertise is recognized internationally, notably by the testing that is carried out on engines produced by other vehicle manufacturers to identify and correct problems.

Linamar committed to using AIF funding to support the development of a wide range of powertrain components related to new engines, transmission components and drivelines that will contribute to increasing fuel efficiency for advanced automotive vehicles and adapting metal forming processes to produce lighter, stronger parts. A key component of the proposed project is to work with automotive parts suppliers to identify advanced product or processes technologies that could be integrated, developed and commercialized by Linamar in new, advanced and environmentally efficient powertrains, components and related production systems. The work carried out under the AIF agreement complements that of Linamar's R&D centre, which was funded in part with support from the Government of Ontario (Ontario).

Since signing its CA, Linamar has undertaken work on the development of core powertrain components, assemblies and related production processes. This includes the flow forming equipment purchased for clutch modules, the ongoing design of clutch module housing, the development of the camshaft process, development and manufacturing of differential cases, and powder metal components. For some of these activities, Linamar has started to produce products for companies including GM and Ford and has also taken the approach to work with low-volume OEMs to gain experience in the production of other parts before producing for larger OEMs.

3.2.2 To what extent have the immediate outcomes of the AIF been achieved?

Key Finding: The AIF has largely achieved its immediate outcomes. There is awareness and understanding of the program within the target audience; proposals submitted align with program objectives; duplication between the AIF and Ontario application processes has been minimized; and, recipients have leveraged funding from other sources and are undertaking R&D work. While the AIF has also been successful in attracting and retaining automotive product and R&D mandates from firms operating in Canada, it has not attracted new mandates from companies outside of Canada. Evidence suggests that factors beyond financial incentives are considered by companies when making such decisions.

The AIF logic model identifies six immediate outcomes for the program (see Figure 1, p. 5), which have largely been achieved during the time frame the evaluation examined.

Outcome: Awareness and understanding of the program among target audience

AIF's target audience is Canadian corporations engaged in vehicle or powertrain assembly operations associated with significant automotive innovation and R&D initiatives in Canada. These include OEMs with operations located in Canada and suppliers who are able to meet the minimum investment threshold, initially of \$300 million and then \$75 million. AIF had set a target of reaching 25% of its target audience. Ultimately all five OEMs in Canada and several major Canadian suppliers inquired about the program, which exceeded the program target.

In addition, between 2008/09 and 2011/12, program staff received 75 inquiries into the AIF primarily from OEMs, suppliers, industry associations, other companies in the private sector, and university students, indicating that awareness spread beyond the initial target audience. This high level of awareness was corroborated in interviews with individuals from recipient companies, non-recipient companies, experts, and program staff.

Outcome: Major vehicle and powertrain assemblers and automotive R&D performers submit proposals aligned with program objectives

The AIF targeted receiving one proposal under the program per year. To date, 6 proposals were submitted to the AIF, of which 4 were approved. One targeted OEM chose not to submit an application due to the financial crisis. All of the proposals underwent a due diligence process to ensure each company's project was in line with program objectives and targeted R&D initiatives as outlined in Section 1.2.

Outcome: Duplication is minimized in application process

During the course of the AIF program, IC and Ontario have been effectively and appropriately coordinating their activities, including holding joint meetings to discuss projects with proponents (e.g. during the due diligence phase) and regularly communicating via phone and email. One official noted that there is no set procedure for coordination and it is done ad hoc for each project. In some cases, IC would take the lead on projects and sometimes Ontario would take the lead. This ad hoc approach does not appear to have created any significant difficulties in the process for either officials or applicants.

Three recipients¹¹ stated their appreciation for the high level of communication between the two governments and the coordination of activities, which helped to decrease duplication of activities. For example, there are slight differences between federal and provincial reporting requirements, but these do not appear to cause unreasonable burden on the recipients, as two companies noted they prepare one report that meets both sets of requirements.

Outcome: AIF repayable contributions leverage additional funding sources (e.g. from provinces), in addition to funding from the private sector to attract/retain firms to/in Canada

All recipients were able to leverage additional funding sources, notably from Ontario, along with significant investments by the firms themselves, a requirement of the AIF and Ontario funding. One company had already received funding from Ontario through the OAIS and two of the other companies applied for OAIS funding around the same time as submitting their application for AIF. The proportion of AIF contributions to total project costs ranged from 11% to 14% for each project.

¹¹ The fourth recipient did not receive funding from Ontario at the same time as federal funding under AIF.

Outcome: Target firms make funding decisions to undertake innovative technology and R&D mandates in Canada related to fuel efficient vehicle production

All AIF recipients are undertaking innovative technology and R&D mandates in Canada related to fuel efficient vehicle production.

Ford's Essex Engine Plant and PERDC have been running for a few years now and are meeting their outcomes with respect to implementing innovative technology and undertaking R&D in relation to fuel efficient vehicle production. The Essex Engine Plant produces four variants of engines that, through research undertaken by Ford, have cut down on CO2 emissions. These units are produced on a flexible engine assembly line that allows Ford to respond quickly to changing market demands. PERDC has become a hub for powertrain research that involves Canadian universities and Canadian automotive parts suppliers, capable of conducting research on emissions and performance alternative fuel powertrains. A key objective of Ford is to establish a close link between their powertrain manufacturing operations and PERDC to bridge the gap between laboratory research and the commercialization and integration of new technologies into the product development cycle.

Linamar proposed undertaking product and process development activities in areas of transmissions, engines and drivelines with associated components and modules. This work will create capacity in Canada to develop and produce components that contribute to fuel efficiency, reduce emissions, and promote the adoption of the latest in electronic and green technology. Activities undertaken with AIF funding will complement Linamar's new R&D facility and will help with the development of technologies. R&D undertaken by Linamar will include enabling technologies and product and process innovation in areas including advanced materials, advanced flexible manufacturing techniques, advanced automation, advanced tooling, and innovative fixture and gauging analysis.

Toyota has recently signed their CA, which highlights work focusing on maximizing production efficiency, implementing advanced vehicle technologies and upgrading plant equipment. Magna also recently signed their CA, and will focus on light-weighting using composites and advanced materials to reduce energy consumption in vehicle operation. In addition, R&D projects will include endeavouring to replace oil-based components with renewable plant-based components, and electric vehicles and related components.

Outcome: Product and R&D mandates are retained in/ attracted to Canada¹²

The AIF has succeeded in retaining and attracting product and R&D mandates from firms operating in Canada. For example, Ford's Essex Engine Plant and PERDC represent new product and R&D mandates in Canada. These projects have been established in a facility that previously housed a much smaller R&D centre, and was planned for shut down prior to receiving AIF

¹² In the case of this outcome, the term "mandate" does not necessarily mean that a new facility is being built in Canada. This term can include a new or expanded product line being produced in an existing facility, new or expanded R&D capacity in a new or expanded facility.

funding. Interviewees from most recipients stated that the availability of funding through AIF did influence the company's decision to either retain and/or expand their presence in Canada.

Despite this success, the AIF has been less successful in attracting new firms to invest in Canada. Of those companies that submitted proposals under the AIF, all already had a strong presence in Canada. Experts and companies noted that funding is not the sole consideration for maintaining or expanding a firm's presence in Canada. Other factors identified as influencing companies' decision included:

- The location of existing facilities (assembly plants, company headquarters);
- Access to skilled labour;
- Favourable exchange rate/dollar;
- Labour relations;
- Stability of government; and,
- Quality of life/working conditions.

The extent to which the Government of Canada has control over these conditions varies but they are factors which, even with government incentives, will influence businesses to maintain their presence in Canada or move or establish new activities in Canada.

Some interviewees noted that the amount of repayable contributions under AIF was insufficient to attract companies to establish new product facilities in Canada. These interviewees stressed that the AIF's current rate of contribution to total projects costs (11%-14%) is significantly lower than in other jurisdictions.

The jurisdictional review supported the views of stakeholders and found that the US allocated \$25 billion (US) in funding through its ATVMPLP, the United Kingdom budgeted £2.3 billion for its two-year AAP, and Australia set aside \$1.3 billion (AUS) for its ten-year GCIF. In this context, some interviewees stated that the federal government needs to decide if they want to focus on retaining existing original equipment manufacturers (OEMs) or if they want to attract new OEMs. A decision to attract new OEMs would impact on the scope and structure of the AIF, or any subsequent program.

3.2.3 To what extent is the AIF on track to achieving the intermediate outcomes?

Key Finding: AIF is on track to achieving its intermediate outcomes including increasing or maintaining economic activity, supporting new or expanded flexible manufacturing facilities, and developing/implementing innovative, fuel efficient technologies or processes. Funded projects are also helping to enhance R&D capacity in Canada, and realizing environmental benefits. Finally, the program is helping to secure jobs in the automotive sector, as proponents are reporting that projects will exceed their original employment projections.

There are six intermediate outcomes for AIF, as identified in the logic model (see Figure 1, p.5). At the time of the evaluation, outcomes could be attributed to two of the recipients companies,

Ford and Linamar, as Magna and Toyota signed their CAs in early 2012. As such, examples of activities these two companies are planning to undertake are included where appropriate.

Outcome: Increased/maintained economic activity among the broader supplier community

While specific figures on economic benefits in the larger supplier community are unavailable, the evaluation confirmed, through interviews, the multiplier effect of OEMs and Tier 1 suppliers within the region. Both case studies confirmed that as recipients see benefits of AIF, so do their suppliers. One interviewee shared that a study of the impact of OEMs on the broader community found a multiplier of ten, such that if 1 job is created by the OEM, an additional 9 jobs will be created in the economy as a whole.¹³ Additionally, when OEMs and Tier 1 suppliers are able to obtain funding to maintain their presence in a community, this helps ensure that jobs in the supplier community will also be maintained.

Outcome: New or expanded flexible manufacturing facilities to produce leading edge and more energy efficient vehicles and powertrains

One of the recipients has developed new flexible manufacturing facilities, energy efficient vehicles and powertrains, and other components. Ford has upgraded its Essex Engine Plant facilities to include flexible manufacturing and other machinery that is able to produce components to support more energy efficient vehicles. Ford's R&D facility, PERDC, is undertaking extensive research into components and materials that will improve energy efficiency and/or be made from more sustainable materials.

Linamar has upgraded facilities to include advanced machinery and assembly equipment to produce leading edge and energy efficient vehicle components. These include using aluminum flow forming, optimizing clutch module housing designs, and introducing green technologies focused on engines and transmissions.

Outcome: Development and/or implementation of innovative, fuel efficient technologies or processes in the automotive sector

The evaluation found that recipients have been developing and/or implementing innovative, fuel efficient technologies or processes in the automotive sector. Linamar has been developing techniques including the aluminum flow forming, redesigning components such as clutch modules and camshafts, and introducing new materials. These new and/or updated products are now being produced in Linamar facilities.

Magna and Toyota will also be undertaking work on innovative, fuel efficient technologies and processes. Toyota will be focusing some of its activities on the development of an electric version of one of its models; Magna will be reducing energy consumption through more efficient systems and weight reduction, in addition to developing electric vehicle-related components.

¹³ Center for Automotive Research, "Contribution of The Automotive Industry to the Economies of All Fifty States and the United States," April 2010.

Outcome: Automotive R&D capacity in Canada is enhanced

Ford's R&D facility, PERDC, is undertaking extensive research into components and materials that will improve energy efficiency and/or be made from more sustainable materials. The centre has become recognized internationally as a leader in engine research and testing, due not only to the facilities that are available but also the personnel who undertake the research and testing. The partnerships and collaborations established between PERDC, universities (described further below) and companies is a further testament to its reputation in the automotive industry. During the case study, it was also learned that PERDC has been undertaking the testing of engines for other automotive manufacturing companies.

AIF recipients are also establishing partnerships with educational institutions across Canada. Ford's PERDC has collaborations with University of Windsor, University of Waterloo, University of Toronto, and McMaster University with graduate and doctoral students undertaking research at the centre. PERDC has also identified partnerships with University of Saskatchewan, University of Guelph, Queen's University, University of McGill, University of British Columbia, University of Western and University of Michigan. In addition to hiring students from these institutions, PERDC collaborates on a number of research projects including research on fuel cells, clean engines and light-weight materials, diesel emissions and powertrain research and vehicle testing. Linamar has also developed partnerships with universities, working with McGill University on electric vehicles and with McMaster University on coatings. These partnerships with universities not only help companies meet the mandate of the AIF to promote and build R&D capacity, but it also spreads the AIF's impacts across Canada. During the site visits, interviewees stated that the partnerships have been beneficial for the companies, universities, and the students. The importance of university collaborations was also highlighted by an expert in the automotive industry who noted that such collaborations have helped to make Canada a leading nation in innovation.

Toyota and Magna are both planning to enhance their R&D capacity over the span of their project life-cycles. At Magna, this includes the development of recyclable materials to replace traditional petroleum-based materials, as well as light-weighting using composites and advanced materials. Toyota will be developing and implementing fuel efficient technologies, particularly for the production of electric vehicles.

Outcome: Employment in the automotive sector are secured/remain in Canada

The case studies found that employment has been retained in Canada with additional jobs expected to be retained and/or created with the two more recent CAs.

Evidence from the case studies and file review found that both Ford and Linamar are on track to exceed the job targets articulated in their application, including jobs created as well as jobs retained. Of note, Ford has recently added a third shift at its Essex Engine Plant to meet increased demand for its Ford F-150 and Mustang lines.

Both Toyota and Magna expect to retain and/or create new jobs as a result of the projects funded through the AIF.

Outcome: Environmental benefits of greener vehicle parts manufacturing and assembly realized

There is evidence from one firm that environmental benefits are being realized. In particular, Ford has identified significant reductions in CO2 emissions to an estimated total of more than 381,000 metric tonnes from 2009 – 2011. Linamar has also reported they have seen a reduction in the consumption of raw materials as a result of the activities being pursued with the AIF repayable contributions.

Both Magna and Toyota plan to focus on technologies and/or components that will be more fuel-efficient and energy-efficient. Additionally, Toyota plans to upgrade its plant facilities to switch its paint shop from using a solvent-borne system to a water-borne system, which will lower emissions and minimize the environmental impact of the manufacturing facility.

3.2.4 What factors have facilitated the success of the program? What have been some of the barriers to success?

Key Finding: The design and delivery of the AIF has been a significant contributor to the success of the program and how it has been received by beneficiaries. However, some interviewees identified some barriers to the success of the program, including the length of the application and approval processes, and the program's perceived lower rate of contribution compared to other jurisdictions.

The AIF has been successful to date. By early 2012, the fund was 91% committed with the signing of the final two CAs. There is also a continuing interest from targeted firms in pursuing projects with objectives similar to those funded under the AIF. In interviews and case studies, it was revealed that most firms would apply for future funding from AIF as it is currently designed if they have eligible projects.

The success of AIF is due, in part, to the design of the program and how well it has been received by intended beneficiaries. Most recipients noted that the level of knowledge of the automotive sector among AIF program staff is appreciated, as is their assistance with ensuring the proper filing of claims and submission of reports. One recipient shared that they proposed a template for filing claims that was easier for the company to use and AIF program staff were willing to adopt this template. Furthermore, given differences between federal and provincial reporting requirements, companies noted that AIF's willingness to accept one report that covers the requirements of both levels of government helped reduce the reporting burden.

Recipients also noted AIF's flexibility in moving funding between fiscal years and making project amendments based on market demand or research findings was important to the success of projects. For example, the economic downturn at the onset of the program delayed the initiation and/or progress of projects, resulting in fewer claims made in the first year after the CA was signed. AIF was able to redistribute the funding allocated for that year to the following, ensuring the companies still had access to the funds and were able to continue their projects and file claims.

While there are several factors that have contributed to the success of the program, some barriers were identified by recipients and AIF officials. The length of time the application and approval process took was identified as a key challenge by both AIF officials and recipients. In particular, interviewees identified the gap between project approval and completion of negotiations on the CA as particularly lengthy. One recipient noted that it took approximately two years to work through the process. This delay resulted in two years of expenses that the company expected to claim retroactively being deemed ineligible by IC.

Some interviewees also identified the AIF's rate of contribution as a barrier to program success. The AIF's current rate of contribution is between 11% and 14% of the total project value, which some interviewees suggested is much lower than what would be available in other countries. These interviewees claimed that incentives in other jurisdictions ranged from 30% and 35%, and in some cases between 45% and 55%. However, it should be noted that a key expected result of the AIF is that repayable contributions leverage funding from additional sources, notably provincial governments. For AIF-funded projects that received provincial support, combined funding ratios ranged from 24% to 35% of the total project value.

In addition to the above barriers, some interviewees noted that the five-year timeframe for claiming eligible costs was challenging. Delays due to the economic crisis and the lengthy application process shortened the time period for which eligible costs could be incurred. Interviewees noted that these factors, along with the long-term nature of R&D projects themselves, would make it challenging for firms to spend funds by the May 2013 deadline.

3.2.5 Is the AIF operating in a cost-efficient manner?

Key Finding: Evidence suggests that the AIF is operating in a cost-efficient manner. The program's five-year operating costs are lower than originally anticipated, and efforts have been made to allocate work efficiently, and take advantage of existing IC resources in administering the Fund.

The AIF is unique in terms of size and funding mechanism to other incentive programs looked at through the jurisdictional review. The AIF's relatively small funding amount (\$250 million over five years), combined with the nature of support (i.e. repayable contributions) make comparing cost-efficiency across programs difficult. Therefore, to assess cost-efficiency, the evaluation examined whether activities were carried out within budget and the degree to which opportunities to save money were sought out.

When the program was established, AIF was allocated \$6.4 million over five years to administer the program. These funds total 2.6% of total program funds and include both salaries and operating and maintenance (O&M) costs. To assess the overall efficiency of the AIF program, the evaluation compared the estimated operating cost of the program to the actual costs for each fiscal year. This comparison can be found in Table 3 below.

Table 3: Comparison of Planned vs. Actual Operating costs for the AIF (\$000)												
Cost	2008-09		2009-10		2010-11		2011-12		2012-13 ¹⁴		Total	
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual
Salaries	572	277	763	1,032	763	821	763	660	763	775	3,624	3,565
O&M	428	241	487	618	687	87	587	249	587	593	2,776	1,788
Total	1,000	518	1,250	1,650	1,450	908	1,350	909	1,350	1,368	6,400	5,353

Table 3 shows that while operating costs varied by fiscal year, overall the AIF has operated at approximately \$1,047,000 below what was originally anticipated at the outset of the program. These variations by fiscal year are not unusual, given the lag between the establishment of the program and signing of contribution agreements, and the slow down in R&D spending as a result of the economic downturn.

In addition to the data provided above, AIF staff undertook to minimize the costs of administering the Fund through several means. In particular, AIF is drawing on expertise already available within IC through the establishment of a Memorandum of Understanding (MOU) with IC's Industrial Technologies Office (ITO) to assist with processing claims submitted by companies. This helps to ensure due diligence in the processing of claims using resources and expertise already available within the department. AIF have also allocated their work to staff persons in such a way to maximize efficiency. For example, each program officer is assigned one file, allowing them to specialize and minimize potential duplication in work. Additionally, efforts have been made to share policy expertise among the Branch, not just within the program, further contributing to minimizing costs.

3.2.6 Are the most appropriate and efficient means being used to achieve objectives relative to alternative delivery approaches?

Key Finding: The repayable contribution model appears to be appropriate for the program. The evaluation did not find conclusive evidence that other delivery models would be more efficient in achieving the program's objectives.

The funding model used by AIF (i.e. repayable contributions) is considered by the majority of those interviewed, including most recipients, to be an appropriate funding mechanism. Interviewees from both case studies appreciated that while other jurisdictions may offer more favourable funding mechanisms (e.g. grants or loans), the use of repayable contributions offers a level of oversight and accountability to Canadians.

Evidence gathered from the jurisdictional review does not conclusively show that programs using other mechanisms (e.g. loans and grants) have been more effective than the AIF:

¹⁴ Planned and actual figures for 2012-13 fiscal year are estimates only.

- The US ATVLMP program is currently experiencing problems with at least one recipient filing bankruptcy, and a lack of reporting mechanisms has resulted in little information available about the effectiveness of the program.¹⁵
- Australia's GCIF grant program had a significantly lower investment threshold for proponents than the AIF, helping to make the program available to more manufacturers and suppliers. This program, however, was cancelled to redirect funding to disaster relief, and information is not available as to the effectiveness and efficiency of the program.
- The United Kingdom's Automotive Assistance Program was a two-year program that expired December 31, 2010. The two-year length was determined by European Union regulations though it was largely felt among the automotive industry in the country that this was an insufficient period of time to see outcomes from funded projects.¹⁶

While there was general agreement that repayable contributions were appropriate for the AIF, interviewees and case study participants noted the difference between Canada and other jurisdictions with regards to incentives in the automotive sector more broadly. Respondents noted that other jurisdictions are generally more proactive in approaching auto manufacturers to find out what would attract them to their country/jurisdiction. This degree of flexibility has made it easier to offer incentives that meet the needs of the manufacturers in the form of infrastructure improvements, tax credits, and grants, as opposed to a program like the AIF, which requires companies to approach them with proposals. Nevertheless, in the opinion of most interviewees, a program such as AIF, with terms and conditions, sends a clear message that Canada is "at the table," provides clarity around the types of projects eligible for funding, and increases transparency for the target audience.

¹⁵ Jerry Seper, "GOP Senators feeling bad Karma," *The Washington Post*, (July 24, 2012) Accessed August 10, 2012 at <http://www.washingtontimes.com/news/2012/jul/24/gop-senators-feeling-bad-karma/>; Kevin Freking and Tracie Cone, "Report says warnings ignored in Solyndra loan," *The Seattle Times*, (August 2, 2012) Accessed August 10, 2012 at http://seattletimes.nwsource.com/html/politics/2018833244_apussolarmanufacturerinvestigation.html

¹⁶ UK Parliament, "*Specific BIS business support schemes*," Government of the United Kingdom, Accessed August 10, 2012 at <http://www.publications.parliament.uk/pa/cm201011/cmselect/cmbis/561/56107.htm>

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

Regarding the relevance and performance of the AIF, the following conclusions have been reached.

Relevance:

- Should Canada wish to maintain and/or grow its automotive footprint, there is a need for a program to enable the sector to invest to meet environmental challenges, respond to changing consumer demand, and compete effectively in a globally competitive environment.
- The AIF is consistent with federal roles and responsibilities as identified in the *Department of Industry Act*. There is no overlap between the AIF and other federally-funded automotive R&D programs, and Ontario programs that support automotive investments complement the AIF program.
- Targeted investments in private sector research and development continue to be a priority for the federal government and the AIF is aligned with IC priorities.

Performance:

- Despite some early delays in project implementation and the impact of the economic downturn in 2008, recipients are producing outcomes in line with their Contribution Agreements.
- The AIF has largely achieved its immediate outcomes. There is good awareness of the AIF among the program's target audience and processes have been streamlined to minimize the bureaucratic burden on applicants and recipients. Recipients have successfully leveraged other sources of funding for their projects, and are undertaking innovative technology and R&D mandates in Canada related to fuel efficient vehicle production. Finally, the AIF has encouraged companies operating in Canada to make further investments in facilities, product lines, and/or R&D facilities and investments; however, the program has not attracted investments from firms not already operating in Canada.
- The AIF is on track to achieve its intermediate outcomes by providing repayable contributions to projects that: increase/maintain economic activity in the supplier community; develop new or expanded flexible manufacturing facilities; enhance R&D capacity; secure employment in the automotive sector; and, realize environmental benefits.
- AIF is generally well designed and has been well received by intended beneficiaries. Nonetheless, some barriers to success were identified, including the length of the application and approval process and the AIF's perceived lower rate of contribution when compared to other jurisdictions.

- Evidence suggests that the AIF is operating in a cost-efficient manner and repayable contributions appear to be an appropriate funding model for the program.

4.2 Recommendations

The conclusions of the evaluation lead to the following recommendations:

Recommendation 1: The program should consider developing service standards to improve the timeliness of the application and approval process.

Recommendation 2: The program should ensure that the AIF's rate of contribution (i.e., as a proportion of the total project value) continues to reflect program objectives in the context of a highly competitive, international automotive sector.