Industry Canada's 2015 Sustainable Development Strategy

Industry Canada's 2015 *Sustainable Development Strategy* contains the following elements:

1. Industry Canada Sustainable Development Vision Statement
2. Industry Canada Decision-making and Sustainable Development Practices, including Strategic Environmental Assessment
3. Industry Canada's Contribution to Themes I to III of the Federal Sustainable Development Strategy
4. Industry Canada's and Industry Portfolio's Additional Sustainable Development Activities
5. Industry Canada's Greening Government Operations Supplementary Tables
6. *Federal Sustainable Development Strategy*

The 2013-2016 *Federal Sustainable Development Strategy* was tabled in Parliament in November 2013. The 2013-2016 *Federal Sustainable Development Strategy* guides Industry Canada's sustainable development strategy for 2015. Industry Canada's 2015 strategy fully aligns with the federal strategy and supports its enhanced economic dimension through the integration of sustainable consumption and production principles and practices wherever possible.

Sustainable consumption and production (SCP) practices can be considered the economic dimension of sustainable development. Advancing SCP patterns in the economy and society can help make progress towards sustainable development and long-term economic prosperity. Effective SCP is dependent on innovation and technology as it aims to deliver high functional value while minimizing resource use and environmental impacts. At the 2012 United Nations Conference on Sustainable Development in Rio de Janeiro, Brazil, Canada signed onto a multilateral agreement that included a voluntary framework on SCP—the 10 Year Framework of Programs, which lists notable SCP programs and practices, such as the development of sustainable products, processes and business models, and involves sustainable sourcing, production, and distribution; eco-efficiency and waste reduction; and influencing consumer choices. Making progress towards SCP is a long-term process that requires the active engagement and leadership of many actors including industry. The engagement of the private sector, especially small- and medium-sized enterprises, is critical.

1. Industry Canada Sustainable Development Vision Statement

In support of innovation and competitiveness, Industry Canada works with key partners to promote the benefits of sustainable development, and to encourage the greater adoption of sustainable technologies and practices by Canadian businesses, consumers and communities.

The Sustainable Development Vision Statement builds on Industry Canada's mandate and acknowledges the key role that Industry Canada has in fostering innovation and competitiveness, and promoting awareness of the economic benefits of sustainable development practices for businesses, consumers and communities.

As Canadian business, consumers and communities adopt sustainable technologies and practices, there will be positive benefits for the environmental goals of the 2013-2016 *Federal Sustainable Development Strategy* —protecting air, water, nature, and Canadians.

2. Industry Canada Decision-making and Sustainable Development Practices including Strategic Environmental Assessment

Sustainable development considerations are integrated into Industry Canada's decision-making process in four ways:

1. through a sustainable development management system;
2. through sustainable development performance reporting;
3. through its participation in interdepartmental committees; and
4. through the application of multi-criteria decision-making tools, including Strategic Environmental Assessment (SEA).

1. Sustainable Development Management System

The Assistant Deputy Minister of the Strategic Policy Sector leads the planning and implementation of the department's contribution to the *Federal Sustainable Development Strategy* and to Industry Canada's *Sustainable Development Strategy*.

The Performance Management Agreements of the Director General of the Strategic Policy Branch and the Director of Policy Coordination and Regulatory Affairs at Industry Canada also include responsibility for policy co-ordination and management of sustainable development issues, including oversight of the manager-level Departmental Sustainable Development Co-ordinator position in the Policy Co-ordination and Regulatory Affairs Directorate.

The Departmental Sustainable Development Co-ordinator assists in advancing sustainable development policies and practices at Industry Canada by supporting the strategic integration of environmental considerations into policy development and decision-making. Key activities include: working with departmental and portfolio officials to identify potential implementation strategies and develop them for inclusion in the departmental and federal sustainable development strategies; developing Industry Canada's annual *Sustainable Development Strategy* and annual progress report; providing Industry Canada input into the *Federal Sustainable Development Strategy* and progress report; and participating in various interdepartmental committees and working groups for the development and implementation of the *Federal Sustainable Development Strategy*. The Departmental Sustainable Development Co-ordinator also serves as Departmental Strategic Environmental Assessment Advisor, which helps to further ensure integration of sustainability considerations into departmental programs, policies, and decision-making.

The Departmental Strategic Environmental Assessment Advisor guides, coordinates and monitors SEA activities across IC including: providing advice and guidance to Directors/Proposal Leads regarding the application of the department's *SEA Policy*; with the support of Human Resources Branch and Communications and Marketing Branch, providing training and raising awareness about the *2010 Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals* and supporting Guidelines and the use of SEA as a tool for determining environmental effects; reviewing SEA documents early and as often as required to ensure consistency with the 2010 Cabinet Directive and IC's SEA policy; tracking and monitoring departmental compliance with the SEA Policy; reporting annually to the Deputy Minister on the implementation of IC's SEA policy; supporting integrated reporting on SEA performance at IC through the Report on Plans and Priorities (RPP), the Departmental Performance Report (DPR) and Industry Canada's *Sustainable Development Strategy* reporting process; providing reports to the Commissioner of the Environment and Sustainable Development on departmental compliance with the 2010 Cabinet Directive, as required; leading ongoing improvements to SEA processes and guidance materials to reflect both federal and departmental lessons learned; participating in the interdepartmental SEA Advisory Committee led by the Canadian Environmental Assessment Agency; and managing the content of the SEA wiki and the SEA website, particularly the SEA public statements page.

In order to champion sustainable development, the Strategic Policy Branch works closely with other parts of Industry Canada to integrate sustainable development considerations into policy and program development and implementation. This includes leading meetings of intradepartmental working groups on sustainable development policy and operational issues, and advising the Assistant Deputy Minister of Strategic Policy Sector, as needed.

Industry Canada has strengthened the department's Sustainable Development Management System by integrating the Corporate and Management Sector, which is the departmental lead for Greening Government Operations. This ensures better alignment with the 2013-2016 *Federal Sustainable Development Strategy*.

Industry Canada has also strengthened the department's Sustainable Development Management System by including the Audit and Evaluation Branch, which is the departmental lead for auditing and evaluating all departmental programs, including those which appear in the Sustainable Development Strategy. The Audit and Evaluation Branch, with the collaboration of Strategic Policy Branch and the program lead, will consider including questions related to sustainable development in the scope of future audits and evaluations of Industry Canada programs which appear in the Sustainable Development Strategy, as appropriate. IC will report on the findings of those audits and evaluations that are relevant to sustainable development in the annual Progress Report on the implementation of the Sustainable Development Strategy.

2. Sustainable Development Performance Reporting

As required in the 2013-2016 *Federal Sustainable Development Strategy*, Industry Canada reports progress annually on the implementation of its commitments under the Federal and Departmental Sustainable Development Strategies through the Departmental Performance Report. Commencing in 2014, IC will also report on the conclusions of audits and evaluations conducted on Industry Canada programs included in the Sustainable Development Strategy in the annual departmental Progress Report on the implementation of the Sustainable Development Strategy.

3. Participation in Interdepartmental Committees

Officials at Industry Canada are members of a number of interdepartmental working groups related to sustainable development, including on the Assistant Deputy Minister and Director General *Federal Sustainable Development Strategy* committees chaired by Environment Canada, and the Community of Practice on Strategic Environmental Assessment chaired by the Canadian Environment Assessment Agency.

4. Multi-criteria Decision-Making Tools, including Strategic Environmental Assessment

The department uses two main Cabinet Directives to inform its decision-making process with regards to environmental and sustainable development considerations. These tools will continue to be used in 2015:

- *2012 Cabinet Directive on Regulatory Management;* and
- *2010 Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals*

The 2012 *Cabinet Directive on Regulatory Management* requires all departments to conduct a Regulatory Impact Analysis Statement as a means of ensuring that regulatory activity serves the public interest, including in the area of quality of the environment.

The 2010 *Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals* requires all departments to align their Strategic Environmental Assessments with the goals and targets of the *Federal Sustainable Development Strategy.*

Industry Canada's Strategic Environmental Assessment policy complies with requirements of the *2010 Cabinet Directive on Environmental Assessment of Policy, Plans and Programs* and the *2010 Guidelines to the Cabinet Directive*. The policy requires that the 2013–2016 *Federal Sustainable Development Strategy* goals and targets be taken into consideration in the Industry Canada decision-making process. In addition, Industry Canada has strengthened the Strategic Environmental Assessment management system to ensure that the policy is effectively implemented across the department and made this available to Industry Canada employees.

In 2015–16, Industry Canada will incorporate best practices when reporting information on Strategic Environmental Assessments and linking results to the *Federal Sustainable Development Strategy* to ensure that decision-making on issues related to the environment is transparent and in keeping with the 2010 Cabinet Directive. In particular, Industry Canada will publish in the Departmental Performance Report the number of preliminary scans and full Strategic Environmental Assessments conducted on an annual basis. Industry Canada will also prepare an annual report to senior management on the implementation of the SEA policy.

Industry Canada will continue to ensure that its decision-making process includes consideration of the FSDS goals and targets through the Strategic Environmental Assessment (SEA) process. An SEA for policy, plan or program proposals includes an analysis of the impacts of the given proposal on the environment, including on the FSDS goals and targets. The results of Industry Canada's detailed assessment are made public when an initiative is announced. The purpose of the public statement is to demonstrate that the environmental effects, including the impacts on achieving the FSDS goals and targets, of the approved policy, plan or program have been appropriately considered during proposal development and decision making.

For more detail on Industry Canada's *Strategic Environmental Assessment* visit its website.

3. Contribution to Themes I – III of the Federal Sustainable Development Strategy

The following lists thirteen implementation strategies for which Industry Canada is responsible, as they appear in Annex 1 of the 2013-2016 *Federal Sustainable Development Strategy:*

- Continue to work with industry stakeholders to encourage and promote the adoption and adaptation of new technologies such as aerospace, information and communications technologies. (Implementation Strategy 1.1.3)
- Continue to implement the Strategic Aerospace and Defence Initiative in support of strategic, research and development projects that contribute to new Aerospace and Defense technologies, and which may reduce GHG emissions and produce new energy efficiencies. (Implementation Strategy 1.1.4)
- Continue to support the development and promote the use of corporate social responsibility (CSR) management tools by industry and the use of CSR standards in the Canadian marketplace in support of sustainable consumption and production, innovation and competitiveness. (Implementation Strategy 1.1.5)
- Continue to work with key stakeholders to ensure that consumers have the information and tools needed to protect their interests, while engaging in, and supporting, research and policy development on consumer issues such as sustainable consumption. (Implementation Strategy 1.1.8)
- Continue to promote sustainable manufacturing practices to Canadian businesses recognizing that the adoption of technologies and processes that support innovation and competitiveness can also increase environmental sustainability. (Implementation Strategy 1.1.9)
- Continue to advance environmental sustainability through support to co-operatives as businesses with economic, environmental and social sustainability goals by identifying and addressing barriers and opportunities to co-operative growth, and enabling access to emerging market opportunities. (Implementation Strategy 1.1.10)
- Continue to support the growth of business services to manufacturing, including those which integrate innovation into product design and development and into the supply chain, and can result in environmental sustainability benefits. (Implementation Strategy 1.1.11)
- Continue to collaborate with partners to enhance Canada's competitive advantage in hydrogen and fuel cell technology development and commercialization. (Implementation Strategy 1.1.21)
- Continue to implement the Automotive Innovation Fund (AIF) through to 2018 in support of strategic, large-scale research and development projects leading to innovative, greener and more fuel-efficient vehicles. (Implementation Strategy 1.1.28)
- Provide scientific expertise, guidance and advice to decision-makers, and develop and apply models for social, cultural and economic valuation of ecosystem services to support sustainable development decision-making so that ecosystem information and environmental effects of development proposals can be factored into decisions. (Implementation Strategy 4.3.8)

- Support research efforts to develop and apply models for economic valuation of natural capital to improve the understanding of natural capital productivity and productivity in general in Canada and to support sustainable development decision-making. (Implementation Strategy 4.3.9)
- In accordance with mandated responsibilities, provide environmental and/or other information to reduce the risk of, and advice in response to, the occurrence of events such as polluting incidents, wildlife disease events or severe weather and other significant hydro-meteorological events as applicable. (Implementation Strategy 4.7.4)
- Continue to co-operate with partners across Canada to implement the Computers for Schools program to divert electronic equipment from landfills thus protecting nature, preventing water pollution and providing economic and social benefits to Canadians. (Implementation Strategy 4.8.4)

A detailed description of these activities, including their link to Industry Canada's Program Alignment Architecture (PAA), and how they contribute to the *Federal Sustainable Development Strategy* goals and targets are provided in the next pages.

Implementation Strategy 1.1.3

Continue to work with industry stakeholders to encourage and promote the adoption and adaptation of new technologies such as aerospace, information and communications technologies.

Link to FSDS Goals and Targets

Theme I Addressing Climate Change and Air Quality

- **Goal 1** Climate Change: Reduce greenhouse gas emission levels to mitigate the severity and unavoidable impacts of climate change
    - **Target 1.1** Climate Change Mitigation: Relative to 2005 emissions levels, reduce Canada's total greenhouse gas emissions (GHG) 17% by 2020.

Link to Industry Canada's PAA

- **Strategic Outcome** 2 Advancements in science and technology, knowledge, and innovation strengthen the Canadian economy
    - **Program**--Science, Technology and Innovation Capacity
        - **Sub-Program**--Science and Technology Partnerships
    - **Program**--Industrial Research and Development Financing
        - **Sub-Program**—Aerospace and Defence Innovation

Description of the Implementation Strategy

Aerospace:

The Green Aerospace Research and Development Network (GARDN) fosters development of technologies that will reduce environmental footprint of the aerospace industry in a broad range of areas from noise and emissions to materials and manufacturing processes. The objective of the GARDN is to provide collaborative opportunities for the original equipment manufacturers, small and medium enterprises, universities and other key stakeholders in the areas of environmental technologies. Industry Canada will continue to participate as an Ex-Officio member of the Board of Directors of GARDN. With a budget of close to $24 million over five years funded equally by the federal government and participating aerospace companies, GARDN II will focus on three key themes: quiet, clean and sustainable technologies.

GARDN II has already announced the launch of nine research and development projects, representing more than $15 million in funding. Beyond their environmental benefits, the projects are expected to have a positive impact on Canadian aerospace products and services, the business success of companies, and the training and development of highly qualified personnel.

Relationship with FSDS Target(s)

GARDN is intended to assist the Canadian aviation industry in reducing its environmental footprint and meeting environmental and sustainability requirements (in operation and manufacturing) through innovation in environmental technologies, infrastructure development, and collaboration across the industry.

Non-Financial Performance Expectations

Other Industry Canada planned outcomes include: Science and technology partnerships exist between industry and academia; and, government, academic and industrial partners collaborate to minimize the aerospace, information and communications technologies industries' impacts on the environment.

Performance Measures

GARDN:

- Dollars of cash and in-kind industrial and other contributions leveraged per dollar investment for the GARDN.
- Number of companies involved in the GARDN.

Implementation Strategy 1.1.4

Continue to implement the Strategic Aerospace and Defence Initiative (SADI) in support of strategic research and development (R&D) projects that contribute to new Aerospace and Defence technologies, and may lead to reduction of GHG emissions and produce new energy efficiencies.

Link to FSDS Goals and Targets

Theme I Addressing Climate Change and Air Quality

- **Goal 1** Climate Change: Reduce greenhouse gas emission levels to mitigate the severity and unavoidable impacts of climate change
    - **Target 1.1** Climate Change Mitigation: Relative to 2005 emissions levels, reduce Canada's total greenhouse gas emissions (GHG) 17% by 2020.

Link to Industry Canada's PAA

- **Strategic Outcome** 2 Advancements in science and technology, knowledge, and innovation strengthen the Canadian economy
    - **Program**--Industrial Research and Development Financing
        - **Sub-Program**—Aerospace and Defence Innovation

Description of the Implementation Strategy

SADI has three objectives, namely: to encourage strategic R&D that will result in innovation and excellence in new products and services; enhance the competitiveness of Canadian aerospace and defence companies; and, foster collaboration between research institutes, universities, colleges, and the private sector. Although the environment and sustainable development are not explicit objectives of SADI, an ultimate outcome of the program is to contribute to the achievement of broader technological, economic, environmental and social benefits for Canadians.

In 2015–16, it is expected that additional SADI projects will be approved, some of which may result in the reduction of GHG emissions and produce energy efficiencies.

Relationship with FSDS Target(s)

Under SADI, approved projects may result in environmental benefits which help advance the goals and targets of the FSDS. For example, some projects may report a reduction of GHG emissions and energy efficiency (Goal 1--addressing air quality and climate change) and a reduction in material waste and conservation of natural resources (Goal 3--protecting nature and Canadians).

Non-Financial Performance Expectations

SADI's ultimate outcome is to contribute to the achievement of broader technological, economic, environmental and social benefits for Canadians.

Development and commercialization of innovative products, processes, services and technologies have an environmental benefit for Canada.

Performance Measures

- Number of recipients that reported the potential for environmental benefits

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Implementation Strategy 1.1.5

Continue to support the development and promote the use of corporate social responsibility (CSR) management tools by industry and the use of CSR standards in the Canadian marketplace in support of sustainable consumption and production, innovation and competitiveness.

Link to FSDS Goals and Targets

Theme I Addressing Climate Change and Air Quality

- **Goal 1** Climate Change: Reduce greenhouse gas emission levels to mitigate the severity and unavoidable impacts of climate change
    - **Target 1.1** Climate Change Mitigation: Relative to 2005 emissions levels, reduce Canada's total greenhouse gas emissions (GHG) 17% by 2020.

Link to Industry Canada's PAA

- **Strategic Outcome**–Internal Services

Description of the Implementation Strategy

Under this implementation strategy, Industry Canada will:

- Continue to develop information and management tools for business to help them integrate CSR principles and practices into their core business strategy and daily operations in support of their competitiveness in the global marketplace.
- Continue to post resources on the IC CSR website, such as the *CSR Implementation Guide for Canadian Business*, SME Sustainability Road Map, and the CSR Tool Kit for Business.

- Undertake strategic outreach activities to enhance effectiveness and reach of these tools.
- Continue to promote CSR performance and reporting standards and practices relevant to Canadian business.

Relationship with FSDS Target(s)

Increased integration by the private sector of CSR practices and principles into core business strategy and daily operations will have a positive impact on all of the environmental goals of the FSDS. CSR practices that can help reduce GHG emissions include: eco-efficiency, which leads to reduced energy consumption; rationalization of fleets towards more fuel efficient transportation; design for environment/sustainability (DfE, DfS), life cycle analysis (LCA), sustainable/lean manufacturing practices and extended producer responsibility (EPR) help reduce natural resource inputs into the production of products, thus reducing GHG emissions, and protecting water and nature resources. The integration of CSR practices can make a positive contribution to the realization of sustainable consumption and production patterns in Canada.

Non-Financial Performance Expectations

The ultimate goal is to increase the number of Canadian companies integrating CSR practices into their core business strategy and daily operations, including supply chain mandates. An indicator of this would be the growing number of stand-alone and integrated CSR reports being produced by Canadian companies and posted online, particularly following international standards on CSR disclosure and transparency, such as the Global Reporting Initiative (GRI). As Canadian businesses become increasingly aware of the business case for CSR integration and voluntary CSR standards are increasingly utilized by Canadian business, Canadian industry and SMEs may increase their competitiveness.

Performance Measures

- Number of strategic outreach activities undertaken with a CSR dimension.
- Number of Canadian businesses issuing CSR reports.
- Number of visits to IC CSR website.
- Number of downloads of IC CSR website material.

Implementation Strategy 1.1.8

Continue to work with key stakeholders to ensure that consumers have the information and tools needed to protect their interests, while engaging in, and supporting, research and policy development on consumer issues such as sustainable consumption.

Link to FSDS Goals and Targets

Theme I Addressing Climate Change and Air Quality

- **Goal 1** Climate Change: Reduce greenhouse gas emission levels to mitigate the severity and unavoidable impacts of climate change
    - **Target 1.1** Climate Change Mitigation: Relative to 2005 emissions levels, reduce Canada's total greenhouse gas emissions (GHG) 17% by 2020.

Link to Industry Canada's PAA

- **Strategic Outcome 1** The Canadian Marketplace is Efficient and Competitive
    - **Program** Marketplace Frameworks and Regulation
        - **Sub-Program**—Consumer Affairs

Description of the Implementation Strategy

Industry Canada recognizes that consumers are increasingly interested in the environmental impact of the goods and services they buy, and are looking at ways to make more sustainable choices. Working with key stakeholders, the department strives to provide a wide breadth of consumer information and services, and engages in research and policy development on consumer issues such as sustainable consumption. Industry Canada's Office of Consumer Affairs supports consumer groups and NGOs to ensure they provide effective input into policy development through its Contributions Program for Non-Profit Consumer and Voluntary Organization, funding over 40 sustainable consumption related research projects since 2002. This work can be found through the Consumer Policy Research Database, which was developed to increase knowledge transfer across the consumer policy research community. The department also works to ensure that consumers have the information and tools needed to protect their interests, while encouraging industry to be more innovative and productive. This includes the development of Consumer Information.ca , an online portal that gives fast and easy access to accurate, relevant and reliable consumer information, including information on sustainable consumption.

Under this Implementation Strategy, Industry Canada will:

- Promote the web content developed in 2013 on sustainable development for the consumerhandbook.ca, such as tips for green living, responsible product disposal and car sharing.
- Publish sustainable development related content to Industry Canada's twitter account and News Canada articles, as well as review existing content to ensure that it remains relevant and up-to-date.
- Continue to actively participate and provide the consumer dimension in departmental working groups related to sustainable development activities and strategies.
- Provide ongoing research and analysis on consumer issues related to sustainable development and sustainable consumption.

- Continue to support research and analysis on relevant and timely consumer issues, including sustainable development and consumption, via the Contributions Program for Non-Profit Consumer and Voluntary Organizations.

Relationship with FSDS Target(s)

Sustainable and responsible consumption practices by consumers can have a positive impact on achieving all the environmental goals in the FSDS. For example, when consumers choose to consider environmental factors when making a purchasing decision, they can influence how the product is made in terms of the amount of natural resources including energy and water used to produce it, the process used to produce it, and if and how it can be recycled or re-used. These practices can advance sustainable consumption and production patterns across the economy.

Non-Financial Performance Expectations

Industry Canada's planned outcomes include: increased consumer awareness of sustainable consumption/responsible consumption issues and practices; increased integration of sustainable and responsible consumption practices into purchasing decisions; and, decision-makers have access to informed analysis on issues affecting Canadian consumers.

Performance Measures

- Number of visitors accessing consumer information on sustainable consumption from Industry Canada.
- Number of collaborative research or policy initiatives started or maintained related to sustainable consumption.
- Number of times Industry Canada-supported analysis on sustainable consumption conducted by consumer organizations contributes to public policy discussions or media coverage.
- Number of sustainable consumption research proposals received for funding under the OCA grants and contribution program.
- Number of sustainable consumption research proposals supported annually.

Implementation Strategy 1.1.9

Continue to promote sustainable manufacturing practices to Canadian businesses recognizing that the adoption of technologies and processes that support innovation and competitiveness can also increase environmental sustainability.

Link to FSDS Goals and Targets

Theme I Addressing Climate Change and Air Quality

- **Goal 1** Climate Change: Reduce greenhouse gas emission levels to mitigate the severity and unavoidable impacts of climate change
    - **Target 1.1** Climate Change Mitigation: Relative to 2005 emissions levels, reduce Canada's total greenhouse gas emissions (GHG) 17% by 2020.

Link to Industry Canada's PAA

- **Strategic Outcome** 3 Canadian businesses and communities are competitive
    - **Program**--Industrial Competitiveness and Capacity
        - **Sub-Program**--Industry-Specific Policy and Analysis

Description of the Implementation Strategy

In support of innovation and competitiveness, Industry Canada works with key partners to promote the benefits of sustainable manufacturing by encouraging greater adoption of new technologies and practices that minimize or eliminate production and processing wastes.

Under this implementation strategy, Industry Canada will post information on manufacturing on the Manufacturing Sector Gateway website and encourage greater adoption of advanced, more efficient manufacturing technologies and practices during outreach discussions with targeted stakeholders.

Relationship with FSDS Target(s)

Advanced manufacturing helps to achieve the FSDS environmental goals of addressing air pollution and climate change, maintaining water quality and quantity, and protecting nature as well as goal 3 of the FSDS to enhance employee, community, and product safety.

Non-Financial Performance Expectations

Industry Canada's planned outcome is ensuring that decision-makers have access to informed analysis on trends of Canadian industries.

Performance Measures

- Number of web visits/downloads of advanced manufacturing information from IC's Manufacturing Sector Gateway.

Implementation Strategy 1.1.10

Continue to advance environmental sustainability through support to co-operatives as businesses with economic, environmental and social sustainability goals by identifying and addressing barriers and opportunities to co-operative growth, and enabling access to emerging market opportunities.

Link to FSDS Goals and Targets

Theme I Addressing Climate Change and Air Quality

- **Goal 1** Climate Change: Reduce greenhouse gas emission levels to mitigate the severity and unavoidable impacts of climate change
    - **Target 1.1** Climate Change Mitigation: Relative to 2005 emissions levels, reduce Canada's total greenhouse gas emissions (GHG) 17% by 2020.

Link to Industry Canada's PAA

- **Strategic Outcome**--Internal Services

Description of the Implementation Strategy

Industry Canada advances environmental sustainability through its support to co-operatives as businesses with economic, environmental and social sustainability goals. Co-operative businesses, like a growing number of companies, see value in placing sustainability as part of the company's purpose, creating shared value and benefits for members and stakeholders. IC promotes increased uptake by entrepreneurs of the co-operatives business model by identifying and addressing barriers and opportunities to co-operative growth, and enabling co-operatives access to departmental programs and services in order to capture emerging market opportunities.

Industry Canada will:

- Continue to promote increased uptake by entrepreneurs of the co-operatives business model by raising awareness of the advantages of the model.
- Continue to enable co-operatives' access to government programs and services in order to capture market opportunities.
- Prepare and release 2010, 2011, and 2012 data from the Annual Survey of Co-operatives providing statistical foundation for research on environmental and sustainability trends with co-operatives.

Relationship with FSDS Target(s)

The growth of the co-operative businesses across Canada is likely to have a positive impact on all of the environmental goals of the FSDS--addressing the climate change and air quality, maintaining water quality and quantity, and protecting nature and Canadians.

Non-Financial Performance Expectations

Industry Canada's planned outcomes include:

- increased awareness by entrepreneurs of the co-operatives business model and the support available to them from Industry Canada; and,
- increased awareness by entrepreneurs of the co-operative business model and its contribution to sustainable development, particularly with respect to the influence it can have on shifting to sustainable consumption and production patterns in the economy.

Performance Measures

- Percentage of new businesses that utilize the co-operative business model.
- Growth in number of cooperatives in Canada.
- Increased number of strategic outreach activities undertaken with a co-operatives and sustainability dimension.
- Increased number of requests or usage of co-operative data to increase understanding of co-operatives with environmental and sustainable mandates.
- Increased number of downloads of materials, hits to IC's co-operatives policy website or requests for information.

Implementation Strategy 1.1.11

Continue to support the growth of business services to manufacturing, including those which integrate innovation into product design and development and into the supply chain, and can result in environmental sustainability benefits.

Link to FSDS Goals and Targets

Theme I Addressing Climate Change and Air Quality

- **Goal 1** Climate Change: Reduce greenhouse gas emission levels to mitigate the severity and unavoidable impacts of climate change
    - **Target 1.1** Climate Change Mitigation: Relative to 2005 emissions levels, reduce Canada's total greenhouse gas emissions (GHG) 17% by 2020.

Link to Industry Canada's PAA

- **Strategic Outcome** 3 Canadian businesses and communities are competitive
    - **Program**--Industrial Competitiveness and Capacity
        - **Sub-Program**--Industry-Specific Policy and Analysis

Description of the Implementation Strategy

Industry Canada disseminated the results of studies on the contribution of professional services to the manufacturing industry in Canada, including how professional services can help manufacturers improve their environmental footprint.

In 2015–16, this program no longer continues as it was completed last year.

Relationship with FSDS Target(s)

The integration of environmental sustainability and eco-design early in the product development cycle enables manufacturers to reduce their environmental footprint, reducing wastes, the use of materials and energy, extend product life, and facilitate the re-use and recycling at the end-of-life stage for industrial as well as consumer products. Business services such as engineering, product development and design can contribute to manufacturing competitiveness as well achieving sustainable development objectives (e.g., through eco-design). These practices can help advance the FSDS goals of addressing climate change and air quality, water quality and quantity, and protecting nature by reducing overall impacts on the environment.

Non-Financial Performance Expectations

Industry Canada's outcomes include:

- decision-makers have access to informed analysis on how business services such as design can help affect sustainable manufacturing practices;
- the role of professional services as enablers of manufacturing competitiveness is better understood; and,
- manufacturers better understand the contribution of services such as engineering, design and eco-design in meeting corporate objectives.

Performance Measures

- Number of collaborative research or policy initiatives started or maintained on business services for the manufacturing industry; and,
- Number of strategic outreach activities undertaken with a business services and sustainability, sustainable consumption and production dimension.

Implementation Strategy 1.1.21

Continue to collaborate with partners to enhance Canada's competitive advantage in hydrogen and fuel cell technology development and commercialization.

Link to FSDS Goals and Targets

Theme I Addressing Climate Change and Air Quality

- **Goal 1** Climate Change: Reduce greenhouse gas emission levels to mitigate the severity and unavoidable impacts of climate change
    - **Target 1.1** Climate Change Mitigation: Relative to 2005 emissions levels, reduce Canada's total greenhouse gas emissions (GHG) 17% by 2020.
- **Goal 2** Air Pollution: Minimize the threats to air quality so that the air Canadians breathe is clean and supports healthy ecosystems
    - **Target 2.1** Air Pollutants: Reduce air pollutants in order to maintain or improve air quality across the country and achieve the emission targets which are currently under development in consultations with provinces and stakeholders.

Link to Industry Canada's PAA

- **Strategic Outcome 2** Advancements in science and technology, knowledge, and innovation strengthen the Canadian economy
    - **Program**--Science, Technology and Innovation Capacity
        - **Sub-Program**--Science and Technology Partnerships

Description of the Implementation Strategy

Canada is recognized internationally as a global leader in hydrogen and fuel cell research, development and early stage commercialization. The sector largely consists of small- and medium-sized enterprises and research organizations supported by a well-educated labour force. The largest cluster of hydrogen and fuel cell companies in Canada is located in British Columbia (see the Canadian Hydrogen and Fuel Cell Sector Profile 2013).

Industry Canada will:

- Identify potential issues and opportunities for global value chain engagement and hydrogen energy storage applications.

Relationship with FSDS Target(s)

Deployment of renewable energy technologies and use of hydrogen as an energy carrier will help increase the efficiency of energy systems thereby reducing environmental impacts.

Non-Financial Performance Expectations

Industry Canada's planned outcomes include:

- Decision-makers have access to informed analysis on trends and issues affecting the competitiveness of Canadian industries.

Performance Measures:

- Collaborative research or policy initiatives started or maintained on hydrogen and fuel cell technology development and commercialization.

Implementation Strategy 1.1.28

Continue to implement the Automotive Innovation Fund (AIF) through to 2018 in support of strategic, large-scale research and development projects leading to innovative, greener and more fuel-efficient vehicles.

Link to FSDS Goals and Targets

Theme I Addressing Climate Change and Air Quality

- **Goal 1** Climate Change Mitigation: Reduce greenhouse gas emission levels to mitigate the severity and unavoidable impacts of climate change
    - **Target 1.1** Climate Change Mitigation: Relative to 2005 emissions levels, reduce Canada's total greenhouse gas emissions (GHG) 17% by 2020.

Link to Industry Canada's PAA

- **Strategic Outcome 2** Advancements in science and technology, knowledge, and innovation strengthen the Canadian economy
    - **Program**--Industrial Research and Development Financing
        - **Sub-Program**--Automotive Innovation

Description of the Implementation Strategy

Budget 2008 introduced the AIF, providing $250 million over five years to automotive firms in support of strategic, large-scale projects in the automotive sector to support innovative, greener and more fuel-efficient vehicles. The renewal of the AIF was announced in January 2013, with an additional $250 million over the next five years to 2018. The Minister of Finance announced an additional $500 million for the AIF in Budget 2014 over two years (2014–15 and 2015–16).

Industry Canada will work with the automotive sector to support the development and implementation of innovative, fuel-efficient technologies or processes. Activities supported under the AIF are associated with R&D initiatives such as the development of new products (e.g., advanced emissions technologies, energy-efficient engines and transmissions, advanced materials, and lightweight components and materials); advanced produce testing that ensures cleaner, more efficient automotive performance, and reduced greenhouse gases; and new or expanded facilities to produce leading-edge and more energy efficient vehicles.

In 2015–16, Industry Canada will continue to administer this program, which is one of the Department's main levers to encourage innovation in automotive R&D. Contribution agreements with automotive companies leverage investments in strategic, large-scale R&D projects to build innovative, greener, more fuel efficient vehicles.

Relationship with FSDS Target(s)

The continued implementation of the AIF program should result in innovative, greener and more fuel-efficient vehicles, and more eco-efficient and sustainable manufacturing facilities and processes that will help reduce GHG emissions and air pollution, thus helping to achieve the environmental goal of the FSDS—addressing climate change and air quality.

Non-Financial Performance Expectations

Industry Canada's planned outcome is investments in Canada by automotive companies towards strategic, large-scale R&D projects to build innovative, greener, and more fuel-efficient vehicles.

Performance Measures:

- Number of projects to date focusing on innovative fuel-efficient technologies and processes.
- Dollars to date of investment leveraged per dollar of Industry Canada disbursements in automotive R&D projects.

Implementation Strategy 4.3.8

Provide scientific expertise, guidance and advice to decision makers, and develop and apply models for social, cultural and economic valuation of ecosystem services to support sustainable development decision-making so that ecosystem information and environmental effects of development proposals can be factored into decisions.

Link to FSDS Goals and Targets

Theme 3 Protecting Nature and Canadians

- **Goal 4** Targets to conserve and restore ecosystems, wildlife and habitat
  - **Target 4.3** Terrestrial Ecosystems and Habitat Stewardship

Link to Industry Canada's PAA

- **Strategic Outcome**--Internal Services

Description of the Implementation Strategy

Ecosystem services have socio-economic value: Ecosystem services include the process of plants releasing oxygen to the atmosphere while absorbing carbon dioxide; biotic material filtering drinking water; and, the process of pollination by insects and birds that allow new plants to grow. Increased understanding by government and business of the value of ecosystem services in the economy can increase the understanding of the environmental effects of economic development proposals and this knowledge can be factored into decision-making. Over the next year, Industry Canada will work with Environment Canada, Statistics Canada and other academics to link data of plant and firm activity (through the annual survey of manufacturers) to data for environmental outcomes (e.g., carbon emissions).

Relationship with FSDS Target(s)

As the understanding of the socio-economic value of ecosystem services increases, it is likely that decision-makers will take decisions that increasingly take into consideration the value of ecosystem services. This will help conserve and restore those ecosystems, thus protecting nature.

Non-Financial Performance Expectations

Industry Canada's planned outcomes include: improved understanding by decision-makers in the public and private sectors of the value of ecosystem services; and, integration of the value of ecosystem services into decision-making.

Performance Measures

- Number of times that the value of ecosystem services is integrated into decision-making.

Implementation Strategy 4.3.9

Support research efforts to develop and apply models for economic valuation of natural capital to improve the understanding of natural capital productivity and productivity in general in Canada and to support sustainable development decision-making.

Link to FSDS Goals and Targets

Theme 3 Protecting Nature and Canadians

- **Goal 4** Targets to conserve and restore ecosystems, wildlife and habitat
  - **Target 4.3** Terrestrial Ecosystems and Habitat Stewardship

Link to Industry Canada's PAA

- **Strategic Outcome**--Internal Services

Description of Implementation Strategy

Canada's economy relies on natural capital: Natural capital includes nature's renewable and non-renewable assets that produce socio-economic value such as minerals, energy resources, water resources, plants and animals, and biotic ecosystems. Like all assets, nature's assets should be understood, measured and managed. Measuring the value of natural capital helps to identify those resources which are being used optimally and allows informed decision-making about economic development. Using natural resources more efficiently and increasing their productivity is crucial to Canada's sustainable economic growth. Industry Canada, therefore, has formally pledged support for a Social Sciences and Humanities Research Council partnership development grant research project on natural capital and productivity, which is being led by Sustainable Prosperity, a think-tank based at the University of Ottawa. In the next year, Industry Canada will work with Sustainable Prosperity to support the development and implementation of a research plan.

Relationship with FSDS Target(s)

Supporting research on the economic valuation of natural capital may help protect nature by increasing the understanding of the value natural capital and its importance to sustainable economic development. Understanding the value of Canada's renewable and non-renewable natural assets may lead to sustainable consumption and production strategies by industry as resources are used more efficiently and less waste is produced.

Non-Financial Performance Expectations

Industry Canada's planned outcomes include: improved measurement and management of Canada's natural assets; the integration of concepts related to the valuation of natural capital and natural capital productivity into public and private sector decision-making; the integration of natural capital considerations into national accounts; and, improved productivity outcomes for Canada as these concepts are integrated into productivity data and measures.

Performance Measures

- Industry Canada's contribution to the development and implementation of the research plan.

Implementation Strategy 4.7.4

In accordance with mandated responsibilities, provide environmental and/or other information to reduce the risk of, and advice in response to, the occurrence of events such as polluting incidents, wildlife disease events or severe weather and other significant hydro-meteorological events as applicable.

Link to FSDS Goals and Targets

Theme 3 Protecting Nature and Canadians

- **Goal 4** Targets to conserve and restore ecosystems, wildlife and habitat, and targets to protect Canadians
    - **Target 4.7** Environmental Disasters, Incidents and Emergencies

Link to Industry Canada's PAA

- **Strategic Outcome** 1 The Canadian marketplace is efficient and competitive
    - **Program**--Spectrum, Telecommunications and the Digital Economy
        - **Sub-Program**--Spectrum Management and Regulation

Description of the Implementation Strategy

Under the Federal Emergency Response Plan (FERP), Industry Canada is responsible for:

- Facilitating the restoration and maintenance of telecommunications services during an emergency situation by providing situational awareness and federal representation of the telecommunications stakeholders' interests in efforts such as fuel prioritization,

credentialing, public communications, international assistance, and the movement of resources; and,

- Working with the telecommunications sector to ensure the telecommunications needs of first responders are met and to enhance the repair and restoration of affected networks. In times of emergency, the short term capability to facilitate the rapid repair, replacement and expansion of telecommunications systems is Industry Canada's highest priority.

Relationship with FSDS Target(s)

By providing situational awareness and assistance to telecommunications companies in their efforts to maintain or restore Canada's telecommunications services in an environmental emergency or disaster, Industry Canada contributes to the protection of the health and safety of Canadians and that of the community in general. Protecting Canadians is a goal of the FSDS.

Non-Financial Performance Expectations

In order to be well prepared to respond to an environmental emergency, IC will keep its networks up-to-date, and keep its emergency response plans up-to-date and review them regularly. As a result, Canadians are protected from effects of natural disasters as it relates to the maintenance of emergency telecommunications services.

Performance Measure

- Up- to-date emergency response plans.

Implementation Strategy 4.8.4

Continue to co-operate with partners across Canada to implement the Computers for Schools program to divert electronic equipment from landfills thus protecting nature, preventing water pollution and providing economic and social benefits to Canadians.

Link to FSDS Goals and Targets

Theme 3 Protecting Nature and Canadians

- **Goal 4** Targets to conserve and restore ecosystems, wildlife and habitat, and targets to protect Canadians
    - **Target 4.8** Chemicals Management

Link to Industry Canada's PAA

- **Strategic Outcome 3** Canadian businesses and communities are competitive
    - **Program**--Community Economic Development
        - **Sub-Program**--Computer and Internet Access

Description of the Implementation Strategy

Industry Canada's Computers for Schools Program advances environmental sustainability. As a national, partnership-based program that makes use of surplus electronic equipment, the Computers for Schools Program refurbishes computers and related equipment donated by the public and private sectors. The refurbished computers are distributed across Canada to schools, libraries, registered not-for-profit learning organizations, and Aboriginal communities. By maximizing the utilization of electronic resources, the Computers for Schools Program not only has a positive impact on the environment but provides the opportunity for youth to gain skills and experience in the field of information and communications technology. The re-use of equipment positively impacts the future generation of workers and students by exposing them to technologies and preparing them to be successful in the knowledge-based economy. Over the next year, Industry Canada will:

- continue to manage the Computers for Schools Program to maximise use of electronic resources;
- require recipients to provide details on their recycling protocols; and
- report on the amount of e-waste material managed in 2014/2015.

The Computers for Schools program (CFS) is also part of Digital Canada 150, Canada's digital economy strategy, which represents a comprehensive approach to ensuring Canada can take full advantage of the opportunities of the digital age. It also envisions Canadians armed with the skills and opportunities necessary to succeed in an interconnected global economy. Digital Canada 150 is built on five pillars: Connecting Canadians; Protecting Canadians; Economic Opportunities; Digital Government; and Canadian Content. The CFS program is one of the key components of the Economic Opportunities pillar and provides students and interns with access to digital equipment and skills training.

Relationship with FSDS Target(s)

Through the use of accredited recycling programs, Industry Canada is diverting electronic waste from land fill sites, and making a positive contribution to the *Federal Sustainable Development Strategy* goals of protecting air, water and nature. Electronic waste contains many chemicals and metals which are toxic to the environment. If this waste is disposed in landfill sites, there is a high risk of seepage into the ground water and the soil, which could affect wildlife and their habitat. Refurbishment activities through the Computers for Schools Program have considerable environmental benefits, such as: positive impact on energy used, greenhouse gas reduction, solid and hazardous waste reduction, reduced air and water emissions, and reduction of the environmental footprint. Proper management of chemical substances is essential for protecting

the health of Canadians and the environment, as well as reducing future costs associated with water treatment, clean-up of contaminated sites, and treatment of illnesses related to chemical exposure.

Non-Financial Performance Expectations

Industry Canada will report statistical information on the amount of electronic waste diverted from landfill and sent to recycling for each of its funding recipients. Industry Canada will also report on the number of refurbished computer units delivered annually to partner organizations. The expected result is schools, libraries, not-for-profit learning organizations and Aboriginal communities will receive refurbished computers.

Performance Measures

- The amount of electronic waste sent to recycling for each of its funding recipients.
- The number of refurbished computer units delivered annually to partner organizations.

4. Industry Canada's Additional Sustainable Development Activities

An updated list of additional sustainable development activities has been prepared for Industry Canada and some members of its portfolio.

The list is structured according to the applicable Strategic Outcome and Program Activity, which is identical to the 2015-2016 Report on Plans and Priorities. The list demonstrates that many sectors and portfolio partners in Industry Canada continue to encourage and implement sustainable development related activities.

Strategic Outcome 1: The Canadian Marketplace is Efficient and Competitive

Program--Marketplace Frameworks and Regulations

Sub-Program--Intellectual Property

The Canadian Intellectual Property Office's (CIPO) Expedited Examination of Patent Applications Related to Green Technology came into force on March 3, 2011, allowing patents that are designed to mitigate environmental damage the opportunity to be reviewed more quickly, thus allowing the inventors to be in a position to leverage their intellectual property rights and bring their inventions to market faster. As of December 31, 2013, 160 patent applications have received designation under this legislation, and 81 patents have been granted.

No additional fee is required for advancing the examination of patent applications related to green technologies.

The implementation of the new program advances the goals of the FSDS, specifically the goals of addressing climate change and maintaining water quality. The majority of patents relate to new inventions regarding alternate fuel sources and more efficient industrial processes. The implementation of these patents can reduce the greenhouse gas emissions of businesses, end the reliance on certain toxic heavy metals for manufacturing, and generate clean forms of energy.

These amendments to the *Patent Rules* are in-line with the government's priorities to support innovation, the growth of SMEs, a clean energy economy, and government action on climate change and capacity building. Accelerating the approval of patent applications relating to environmental (green) technologies will foster investment and expedite commercialization of environmental technologies.

In 2015–16, CIPO will continue to expedite the prosecution of patent applications related to environmental (green) technologies at no extra cost provided the commercialization of the technology would help to resolve or mitigate environmental impacts or conserve the natural environment and resources.

Sub-Program--Market Access

The Standards Council of Canada (SCC), a crown corporation member of the Industry portfolio, supports environmental sustainability through the following initiatives:

- SCC's Northern Infrastructure Standardization Initiative, which is part of the Government's Climate Change Adaptation Strategy, supports the development of tools that will increase the capacity of individuals, communities and economic sectors to use standards in Canada's North and address vulnerability due to climate change impacts. Four standards being developed under this initiative cover permafrost management under new and existing buildings, snow load management, community drainage plans and soil characterization. This will help mitigate the need for expensive retrofits and prolong the usability of critical Northern infrastructure, significantly benefiting life quality and safety for Northern Canadians.

- SCC continues to co-chair the Smart Grid Standards Advisory Committee with the Canadian Electricity Association. The committee aims to pursue smart grid technologies that will enhance the reliability, resiliency and efficiency of the North American electrical network.

- SCC's Energy Management Systems accreditation program accredits certification bodies to ISO/IEC 50001. Through this program, SCC helps these organizations improve their clients' energy efficiency, cost and energy performance, thus helping to reduce greenhouse gas emissions a goal of the *Federal Sustainable Development Strategy.*

- SCC's accreditation program for assessing the competency of validation/verification bodies of greenhouse gas (GHG) emissions to ISO/IEC 14065. This supports the GC's sustainability agenda, which includes initiatives to reduce GHGs, a goal of the *Federal Sustainable Development Strategy.*

- SCC continues to work with Environment Canada (EC) to assist EC in its role as the international convenor for the development of a new ISO Environmental Technology (ETV) standard.

- As the leader of Canada's Standardization Network, SCC coordinates and facilitates the participation of Canadian experts on the following technical committees of the International Organization for Standardization (ISO) and the International Electro-technical Commission (IEC), which relate to sustainable development:

    - IEC/SMB/SG1 – Strategic Group on Energy Efficiency and Renewables
    - IEC/SMB/SG3 – Smart Grid
    - ISO TMB Climate Change Coordination Committee – Canada holds the Secretariat through CSA
    - IEC/TC111 – Environmental standardization for electrical and electronic products and systems
    - ISO/TC59/SC17 - Sustainability in buildings and civil engineering works
    - ISO/TC146 – Air quality
    - ISO/TC147 – Water quality
    - ISO/TC163 – Thermal performance and energy use in the built environment
    - ISO/TC190 – Soil quality
    - ISO/TC205 – Building environment design
    - ISO/TC207 – Environmental management (Secretariat)
    - ISO/TC234 – Fisheries and aquaculture
    - ISO/TC242 – Energy management
    - ISO/PC248 - Sustainability criteria for bioenergy
    - ISO/TC268 - Sustainable development in communities
    - ISO/PC277 - Sustainable procurement
    - ISO/IEC JTC1/SC39 - Sustainability for and by Information Technology
    - JPC2 - Joint Project Committee - Energy efficiency and renewable energy sources - Common terminology
    - IEC/TC 120 – Electrical Energy Storage
    - ISO/TC282 – Water Re-Use
    - ISO/PC287 – Chain of Custody of Forest Based Products
    - IECRE – System for Certification to Standards Relating to Equipment for Use in Renewable Energy Applications

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Strategic Outcome 2: Advancements in science, technology, knowledge, and innovation strengthen the Canadian economy

Program--Science, technology and innovation capacity

Sub-Program--Science and Technology Partnerships

The Natural Sciences and Engineering Research Council (NSERC), an Industry Canada portfolio member, provides funding support to scientists and engineers working in a variety of disciplines in Canadian post-secondary institutions on activities that promote sustainable development. In many cases, these researchers also work with partners in industry and government to apply the research and its outcomes to strengthen the national economy and the protection of the environment. In 2014-15, a number of NSERC programs are funding research in priority areas featured in the *Federal Sustainable Development Strategy*. For example, the seven ongoing Climate Change and Atmospheric Research Initiative grants (third of five years of funding) will receive a projected total of $6.88 million; and NSERC is disbursing grant funds to the federal government's research priority areas of Environment and Agriculture, and Natural Resources and Energy, and to the Centre of Excellence in Energy Efficiency (through the Networks of Centres of Excellence program).

The Canadian Space Agency (CSA), an Industry portfolio member, pursues the implementation of Canada's Space Policy Framework announced by the Minister of Industry, James Moore, in February 2014. In the area of stewardship, management and accountability, the framework highlights a whole-of-government approach that is being implemented through a new governance structure. In this context, the CSA, together with its government and industry partners, continues to support sustainable development through the development and operations of Earth observation Satellites and related applications and research. By observing the Earth from space, satellite imagery provides essential information on ocean, ice, land environments, and the atmosphere. Earth observation satellites help monitor and protect the environment, manage natural resources, and ensure the safety and security of Canadians. CSA and academic researchers are also working to better understand the mechanisms governing the atmosphere and its interaction with the oceans, the ecosystem and cosmic radiation. This research recognizes that the atmosphere plays a crucial role in the global ecosystem. The work of the CSA therefore supports all the goals of the *Federal Sustainable Development Strategy* —protecting air, water, nature and Canadians.

The Social Sciences and Humanities Research Council (SSHRC), an Industry portfolio member, advances environmental sustainability through its support for research to post-secondary institutions and their partners, with expenditures of $24.3 million in 2013-14. Among the projects with strong environmental links that will be funded over the next few years: Brock University's research project titled, "Water Economics, Policy and Governance Network", that is studying the economic, political and social aspects of water-related issues, including fracking; Carleton University's Canada Research Chair (CRC) in Governance for Sustainable Development studies on how public policy can be adapted to stimulate innovation and improve the uptake of "greener" technologies; Royal Roads University's CRC in Innovative Learning and Public Ethnography studies on the lifestyles of people living off-the-grid, offering insight into their motivation, attitudes and opinions; Lakehead University's research on a new renewable energy policy framework to help First Nations communities access economic development opportunities; the University of Ottawa's CRC in Climate and Energy Policy research on the costs associated with policies to reduce Canada's GHG emissions and promote renewable sources of electricity; Saint Mary's University's research to rebuild the East Coast fishing industry and improve Canada's coastal economy through protecting coastal ecosystems; and,

Queen's University's project to support economic development in rural communities across Eastern Ontario through the creative economy, tourism, green energy and sustainable agriculture. SSHRC's support to environmental sustainability research helps advance the goals of the *Federal Sustainable Development Strategy* —protecting air, water, nature and Canadians.

Additionally, SSHRC's *Imagining Canada's Future* initiative launched in 2011 set out to identify future challenge areas for Canada in an evolving global context and to which the social sciences and humanities research community could contribute its knowledge, talent and expertise. The initiative builds upon SSHRC's history supporting research in areas that would enhance Canada's ability to address the challenging issues of the future, such as Canadian environmental issues. Following a comprehensive cross-Canada and international consultation process, six future challenge areas as well as four cross-cutting elements were identified as essential for Canadians to address to be successful in an increasingly interconnected and rapidly changing world. Several of these areas--'energy and natural resources', 'global peak population', and 'emerging technologies'--are linked to environmental sustainability and are being integrated into SSHRC's programming.

Program--Industrial Research and Development Financing

Sub-Program--Aerospace and Defence Innovation

Industry Canada's Technology Demonstration Program, launched in September 2013, is expected to:

- result in a concentration of technology development in priority areas with significant potential for broad-based and long-term economic benefits; and,
- be the basis for the next generation of manufacturing, technical capabilities and services in Canada, and generate material economic benefits for Canada in the longer term.

Although the expected results of the Technology Demonstration Program do not explicitly include sustainable development or environmental goals, the program also has an objective to contribute to the achievement of broader technological, economic, environmental and social benefits to Canada. It is anticipated that the first two competitions for the Technology Demonstration Program will be completed in 2014–15. Projects will be evaluated on their ability to generate social, environmental, health, security and other benefits to Canada.

Strategic Outcome 3: Canadian businesses and communities are competitive

Program--Small business research, financing and services

Sub-Program--Small Business Financing and Growth

The Business Development Bank of Canada (BDC), a Crown corporation member of the Industry portfolio and commercial bank dedicated exclusively to entrepreneurs, supports environmental and social sustainability.

BDC's lending to traditional businesses is environmentally responsible. It is guided by the *Canadian Environmental Assessment Act*, 2012, the BDC Environmental Risk Management Policy, and leading international corporate social responsibility guidelines, i.e., the Organization for Economic Cooperation and Development (OECD) Guidelines for Multinational Enterprises and the United Nations Global Compact. BDC also provides venture capital support for Canadian technology-based firms that promote energy efficiencies as well as financing for social purpose companies, consulting support for energy efficient operations, and financing for LEED buildings and large renewable energy projects.

BDC is the only Canadian financial institution to achieve certification as a Beneficial Corporation (B Corp). This required meeting comprehensive standards related to purpose, transparency and accountability that benchmark its economic, social and environmental performance against that of other businesses. BDC joins more than 1000 other B Corp companies across 60 industries in 32 countries that aim to use the power of business to solve social and environmental problems.

Finally, BDC strives to reduce its operational footprint including recycling and energy use management.

In sum, BDC's energy related financing activities address reducing greenhouse gas emissions, one of the goals of the FSDS.

Sub-Program--Service to Business

Industry Canada's Canada Business Network is a program that delivers reliable and up-to-date access to information on government programs, services and tools to Canadian businesses and entrepreneurs. IC is responsible for the Canada Business Network web site. Information on sustainable development programs and practices for businesses has been part of Canada Business Network's content strategy since 2009. Canada Business Network provides information on corporate social responsibility, which advances sustainable development. The main content sections for the web site include:

- Environment and Business:
- Corporate Social Responsibility:
- The Canada Business Network business planning section also encourages businesses to consider sustainable development in their long term planning.

In 2015–16, Canada Business Network will continue to support IC's sustainable development programs and services by ensuring that this content is maintained on an ongoing basis via the canadabusiness.ca website. Canada Business Network will continue to publish blog articles for business on sustainable development programs and practices, including corporate social responsibility.

Program--Community Economic Development

Since its inception in 2009, the Federal Economic Development Agency of Southern Ontario (FedDev Ontario), a regional economic development agency in the Industry Portfolio, has supported a number of projects that promote environmental sustainability under the Southern Ontario Development Program. Some examples include:

- Canadian Manufacturers and Exporters Smart Program, which helps manufacturers make investments to improve their productivity and increase their competitiveness, including projects in the area of energy efficiency and environmental impact reduction;
- George Brown College's Green Building Centre, supporting research to help create smarter, more energy efficient buildings;
- Smart Energy Instruments, which works on developing smart grid sensor technology, integrating advanced measurement and communications functions required to modernize electric power systems onto a chip;
- Ducks Unlimited Canada, supporting the renewal and repair of critical wetland infrastructure across southern Ontario, and by extension, sustainable and healthy communities, by replacing water control structures and beaver fences, upgrading safety guards and repairing dykes.
- BioAmber's new bio-based succinic acid plant in Sarnia (the first and only commercial-scale production plant of its kind in the world) which converts renewable feed stocks into sustainable chemicals that are cost-competitive replacements for petroleum-derived chemicals.
- University of Guelph's Bioproducts Discovery and Development Centre, supporting the development and commercialization of sustainable bio-based materials and bio-based products.
- GreenMantra, in support of a proprietary technology to economically produce a variety of waxes and specialty chemicals using an innovative and environmentally friendly process.
- Vida Holdings Corp Ltd. (Vida) to develop a Multi Chamber Catalytic Converter (MCCC) that converts toxic by-products of combustion in the exhaust of an engine to less toxic substances.
- Woodland Biofuels, a project to develop and patent a low-cost process technology to produce cellulosic ethanol, a biofuel from produced forest and agricultural waste products including wood, grasses, or the inedible parts of plants.
- Pond Biofuels Inc., a project to fully develop a process that is capable of producing energy, biofuels, and protein rich biomass derived from microalgae, while capturing CO2 emissions and other harmful pollutants from untreated smokestack emissions.

FedDev Ontario's Southern Ontario Prosperity Program takes an integrated approach that considers social, cultural and environmental dimensions of economic development. Some examples include:

- Polar Sapphire, a project to commercialize processes to produce high purity aluminafor used in the production of LED lighting and smartphone glass. Light emitting diodes are increasingly used in energy-efficient lighting and consumer electronic display screens.
- Hydrostor Inc., a project to commercialize a Compressed Air Energy Storage system that efficiently stores electricity produced by renewable sources for later use.

FedDev Ontario's support of energy efficiency projects help reduce greenhouse gas emissions, thus addressing climate change in support of the Federal Sustainable Development Strategy goal of addressing climate change and air quality. The activities of FedDev Ontario also serve to encourage sustainable development in southern Ontario communities.

Industry Canada supports environmental sustainability through the integration of sustainability considerations into economic research and policy analysis projects under the Economic Development Initiative (EDI) for Official Language Minority Communities (OLMCs) in Canada, consistent with the alignment with government priorities (including the advancement of sustainable development), in order to improve the socio-economic and sustainable development outcomes of OLMCs and small and medium-sized enterprises (SMEs). Webinars will be held for OLMCs and SMEs on the benefits of integrating sustainability and corporate social responsibility considerations into business operations. Also, research and analysis will be conducted of the potential for SD-oriented activities and benefits for OLMCs. The outcomes of the research and policy analysis will be used to support efforts to develop policies, programming and initiatives that help maximize the economic and sustainable development impacts of OLMCs. The outcomes of the research will help SMEs, including co-operatives, grow and become more competitive, spurring trade, tourism and investment in new and existing markets, creation of new, diversified products and services (including sustainability-oriented products), commercialization of research and development in the form of products and services, job creation and an increase in the number of innovative, diversified SMEs.

Sub-Program--Northern Ontario Economic Development

The Federal Economic Development Initiative for Northern Ontario (FedNor) is a regional economic development organization within Industry Canada. Through FedNor's Northern Ontario Development Program, Industry Canada invests in projects that support community economic development, business growth and competitiveness, and innovation. Under these three priorities, there is a focus on projects in sectors of strategic importance for Northern Ontario, including clean energy generation. Since 2011, sixteen projects have been approved under the Northern Ontario Development Program that involved sustainable development activities. This accounts for total authorized assistance of over $1.7 million and total project costs of over $5.3 million. FedNor works with proponents to support clean energy generation projects and to pursue green business and economic development opportunities that increase the viability and competitiveness of Northern Ontario communities and small- and medium-sized enterprises.

FedNor continues to accept eligible project proposals that may impact sustainable development. Support for renewable energy projects help reduce greenhouse gas emissions thus addressing climate change and encouraging sustainable development within Northern Ontario communities.

Program--Internal Services

Statistics Canada, a member of the Industry Portfolio, supports environmental and social sustainable development as a trusted, relevant and comprehensive source of information on the entire spectrum of Canada's economy and society. The Environment Accounts and Statistics program (EAS) uses a framework based on the concept of natural capital to guide its activities. The program includes surveys on water use, environmental protection expenditures, solid non-hazardous waste, and revenues from environmental goods and services. It also produces environmental accounts that are linked to the System of National Accounts on topics such as natural resource stocks, physical flows of energy and materials and wastes, and land cover and use. Finally, it is one of the leading national statistical organizations to publish research on ecosystems, ecosystem goods and services, and to use spatial analysis. Recent investments in this area include the development of new land cover and land use change statistics that will be released annually. Yearly estimates will also be released tracking renewable water estimates. Both reports are slated to be available in 2015-16.

The program includes analysis of environmental statistics published through the annual *Human Activity and the Environment* report, which serves as a teaching tool in the school system. It also includes the publication on an irregular basis of EnviroStats, which contains short articles focused on topics such as household behaviours that impact the environment, and the statistical analysis of climate and climate change data.

In addition to the EAS program, other parts of Statistics Canada collect data relevant to the environment. For instance, the agriculture statistics program, through the use of sample surveys and the Census of Agriculture, collects and publishes a wide range of data relevant to the environment including crop and livestock production and inventories, use of inputs, and land management practices. The Health Analysis group has examined the relationship between ambient air pollution and environmental contaminants on human health.

As well, Statistics Canada has three formal implementation strategies in the 2013-2016 *Federal Sustainable Development Strategy*, namely: 2.2.2. Maintain a database of indoor radon levels in Canadian homes and buildings. Assess new methods and technologies for measuring and reducing radon gas levels in homes and buildings. Maintain a radon awareness program to give information to Canadians on ways to reduce their exposure to radon (with Health Canada); 3.12.5. Conduct surveys on water use such as the Canadian Environmental Sustainability Indicators Industrial Water Use Survey, Survey of Drinking Water Plants, Agriculture Water Use Survey, and Households and the Environment Survey; and, 4.3.8 Provide scientific expertise, guidance and advice to decision makers, and develop and apply models for social, cultural and economic valuation of ecosystem services to support sustainable development decision-making so that ecosystem information and environmental effects of development proposals can be factored into decisions (with Industry Canada and Environment Canada).

5. Industry Canada's Greening Government Operations Supplementary Tables

As a participant in the 2013-2016 *Federal Sustainable Development Strategy*, Industry Canada is required to implement actions to make progress towards achieving the goals and targets set out in Theme IV: Shrinking the Environmental Footprint: Beginning with Government through its internal services program activity. The 2013-2016 *Federal Sustainable Development Strategy* has three new goals: Goal 6: Greenhouse Gas Emissions and Energy; Goal 7: Waste and Asset Management; and, Goal 8: Water Management. There are six targets under this theme. Specifically, the Department is committed to:

- Reducing greenhouse gas emissions from fleet vehicles by 17 percent from 2005–06 levels by 2020;
- Achieving green procurement targets (including targets related to audio visual equipment, vehicles, computer equipment) by March 31, 2017; and,

Details on Industry Canada's commitments and targets towards Greening Government Operations are provided through the supplementary information tables itemized in the 2015-16 Report on Plans and Priorities.

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6. *Federal Sustainable Development Strategy*

To consult the 2013-2016 *Federal Sustainable Development Strategy* and obtain the broader federal context to departmental and agency sustainable development activities, please see the Environment Canada website.

The 2013-2016 *Federal Sustainable Development Strategy* outlines the integrated, whole-of-government picture of actions and results to achieve environmental sustainability.

The *Federal Sustainable Development Strategy* website is the central location of all departmental sustainable development goals, targets and implementation strategies.