

# Survey of Environmental Goods and Services, 2015

*Français au verso*

## Reporting Guide and Glossary of Terms

This guide is designed to provide additional information as you work through your questionnaire.

If further assistance is required, please call us.

A Statistics Canada employee  
will be happy to assist you.

**Help Line: 1-866-445-4323**



## General Information

### **What is the Survey of Environmental Goods and Services and why is it important?**

The Survey of Environmental Goods and Services (formerly known as the Environment Industry Survey) is conducted every second year to obtain detailed and accurate data on environmental and clean technology goods and services, which are recognized as being important contributors to the Canadian economy.

The data from the survey are aggregated with information from other sources to produce official estimates of national and provincial/territorial economic activity related to environmental protection. Your responses are important to produce reliable statistics that may be used by businesses, non-profit organizations and all levels of government to make informed decisions in many areas.

The information from this survey can be used by your business to plan marketing strategies or to prepare business plans for investors. Governments may use the data to develop national and regional economic policies and to develop programs to promote domestic and international competitiveness. The data may also be used by trade associations, business analysts and investors to study the economic performance and characteristics of your industry.

### **How were you chosen to receive the Survey of Environmental Goods and Services?**

Establishments believed to manufacture or import any of the selected environmental or clean technology goods or services described in this questionnaire are being asked to complete this survey.

Your assistance in completing this survey is vital to the estimation of Canadian economic activity in the area of environmental protection.

### **Is it a legal requirement to complete this survey?**

Yes. The Survey of Environmental Goods and Services is collected under the authority of the *Statistics Act*, Revised Statutes of Canada, 1985, Chapter S19. This Act stipulates that the completion of questionnaires issued under the Act is mandatory. The *Statistics Act* can be found on the Department of Justice website ([www.justice.gc.ca](http://www.justice.gc.ca)).

### **Data-sharing agreements**

To reduce respondent burden, Statistics Canada has entered into data-sharing agreements with provincial and territorial statistical agencies and other government organizations, which have agreed to keep the data confidential and use them only for statistical purposes. Statistics Canada will only share data from this survey with those organizations that have demonstrated a requirement to use the data.

**Section 11** of the *Statistics Act* provides for the sharing of information with provincial and territorial statistical agencies that meet certain conditions. These agencies must have the legislative authority to collect the same information, on a mandatory basis, and the legislation must provide substantially the same provisions for confidentiality and penalties for disclosure of confidential information as the *Statistics Act*. Because these agencies have the legal

authority to compel businesses to provide the same information, consent is not requested and businesses may not object to the sharing of the data.

For this survey, there are **Section 11** agreements with the provincial and territorial statistical agencies of Newfoundland and Labrador, Nova Scotia, New Brunswick, Quebec, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia, and the Yukon.

The shared data will be limited to information pertaining to business establishments located within the jurisdiction of the respective province or territory.

**Section 12** of the *Statistics Act* provides for the sharing of information with federal, provincial or territorial government organizations. Under **Section 12**, you may refuse to share your information with any of these organizations by writing a letter of objection to the Chief Statistician, specifying the organizations with which you do not want to share your data.

Chief Statistician of Canada  
Statistics Canada  
Care of Director,  
Environment, Energy and Transportation Statistics Division  
170 Tunney's Pasture Driveway  
Ottawa, Ontario K1A 0T6

For this survey, there are **Section 12** agreements with Natural Resources Canada; Industry Canada; Foreign Affairs, Trade and Development Canada; Environment Canada; Fisheries and Oceans Canada; Agriculture and Agri-Food Canada; Western Economic Diversification Canada and the statistical agencies of Prince Edward Island, the Northwest Territories and Nunavut.

For agreements with provincial and territorial government organizations, the shared data will be limited to information pertaining to business establishments located within the jurisdiction of the respective province or territory.

### **Filing of this questionnaire**

A completed copy of this form should be returned within 21 days of receipt to:

Statistics Canada  
150 Tunney's Pasture Driveway  
Distribution Centre - SC 0505  
Ottawa, Ontario K1A 0T6

## Instructions

### Establishment covered by this questionnaire

Please report the data for the establishment specified on the label on the front page of the questionnaire.

**Note:** an establishment is the smallest operating unit in your company that can report the following items:

- Value of sales;
- Cost of materials and supplies purchased;
- Opening and closing inventories;
- Number of employees and their salaries and wages.

Generally, an establishment corresponds to a plant, mill or factory. However, it may comprise more than one plant or location when your accounting records do not permit separate reporting of these items.

If your company has more than one establishment, a separate questionnaire should be completed for each establishment that is involved in the production or importing of environmental and clean technology goods or the provision of environmental and clean technology services.

If you are in doubt about the best way to report, or you are not sure what questionnaires are being completed by other establishments in your company, please telephone for assistance at 1-866-445-4323.

### A - Reporting period information

1. Please report information for this establishment's 12-month fiscal period (normal business year) ending between April 1, 2015 and March 31, 2016. Please indicate the reporting period covered by this questionnaire.
2. Please check the appropriate box to indicate any operational changes.

### B - Total Revenue

3. Total revenue is the sum of the value of sales (before royalties, taxes and other charges) and all other revenues, except contributions from owners.

When precise figures are not available please provide your best estimates. Report all monetary values in Canadian funds.

## **C1 - Sales of selected environmental and clean technology goods (machinery, equipment, and products)**

**Only selected environmental and clean technology goods are covered in this questionnaire.**

Sales of environmental goods are defined as amounts derived from the sale of goods (cash or credits) falling within a business's ordinary activities. Sales should be reported net of excise and federal, provincial or territorial sales taxes.

For the purposes of this survey, **clean technology** can be considered to consist of any product, process, or service designed with the primary purpose of contributing to remediating or preventing any type of environmental damage.

**Include** (where applicable):

- Sales (domestic sales and export sales) of goods manufactured at a Canadian location
- Sales of goods manufactured outside Canada and imported for sale in Canada
- Number of units
- Proportion of the sales of goods manufactured at a Canadian location, exported outside Canada

## **C2 - Sales of selected environmental and clean technology services**

**Only selected environmental services are covered in this questionnaire.**

Sales of environmental and clean technology services are defined as amounts derived from the provision of environmental and clean technology services falling within a business's ordinary activities. Sales should be reported net of excise and federal, provincial or territorial sales taxes.

**Include** (where applicable):

- goods sold as part of a service delivered
- domestic and export sales of services provided from a Canadian location
- number of contracts

## **C3 - Total sales**

Total sales of environmental and clean technology goods and services. (sum of questions 4 to 15).

## **D – Exports of environmental and clean technology goods and services**

This section is intended to measure the value of exports of selected environmental goods and services sold to clients/customers outside Canada.

## **E - Employment**

This section measures total employment related to the production and sales of environmental or clean technology goods or services, as a percentage or portion of total overall employment.

### **Include:**

- Total number of full-time equivalents (FTE) employed at this establishment.
- Number or percentage of full-time equivalents (FTE) involved in producing or providing environmental or clean technology goods or services sold by the establishment.

## **F - Additional Market Information**

This section is intended to provide further market information of other businesses that also produce or provide environmental or clean technology goods and services.

### **Include:**

- contact information of other businesses to the best of your abilities. This could include an address, phone number, website or other contact information.

## Glossary of Terms

**Additives/catalysts:** Products that enhance the rate of a chemical reaction.

**Advanced batteries:** Batteries incorporating materials that improve energy storage density, or reduce the weight and size, compared to traditional batteries. Examples may include but are not limited to nickel-hydride and lithium ion batteries.

**Bioadhesives:** Natural polymeric materials that act as adhesives; for example, a glue formed synthetically from biological monomers such as sugars.

**Biochemicals:** Synthesized chemicals made from vegetable oils derived from corn, soybean, canola, and corn starches. They can be made into solvents, lubricants, waxes, adhesives, acetic acid, succinic acid, glycerol and methanol without using traditional petroleum bases.

**Biocomposite and biofibres:** Natural fibres blended with petroleum-based polymers and resins to produce stronger/reinforced materials.

**Bioenergy:** Renewable energy produced from biological materials.

**Biofoam:** Biopolymers made from plant materials that are biodegradable and may be industrially composted at high temperatures. They are durable and suitable for long-term use in virtually all technical and packaging applications.

**Biomaterials:** Materials derived from nature or synthesized in the laboratory using a variety of chemical approaches utilizing plant oils, sugars, or starches to create bioplastics, biofoams, biorubber, or reinforced biocomposites and biofibres.

**Biopolymers:** Polymers built from non-petroleum based monomers (molecules), including plant-based sugars and oils.

**Bioproducts:** Products (other than food, feed, and medicines) made directly or indirectly with biological or renewable agricultural (plant or animal), marine or forestry biomass material.

**Biorubber:** Biodegradable elastomer made from biocompatible monomers.

**Chipper:** A machine used to mechanically reduce the size of feedstock wood material to a size suitable for further processing (e.g., for producing wood pellets or as an input into another bio-manufacturing process).

**Carbon capture and sequestration (storage) technologies:** Technologies used to capture, transport and store carbon dioxide produced as the result of an industrial process, before its release to the atmosphere.

**Clean coal:** Technology and processes that mitigate the emissions produced from the burning of coal for electrical power. Generally, to be considered “clean” the combustion should result in an emission intensity equal to or less than those produced by burning natural gas.

**Clean technology:** For the purposes of this survey, clean technology can be considered to consist of any product, process, or service designed with the primary purpose of contributing to remediating or preventing any type of environmental damage.

**Centrifuges:** Machines or equipment that spin a vessel at high speeds to create separation of materials. Centrifugation can be used to recover solids from slurries, to clarify liquids, or to clarify solids.

**Compressed air:** Compressed air energy storage (CAES) is a way to store energy by compressing air and storing it in underground caverns, depleted wells or aquifers.

**Demand management:** Technologies that encourage and enable customers to shift their demand for electricity from peak periods to off-peak times.

**Digesters:** A mechanical chamber which breaks down organic material using micro-organisms (bacteria) in an oxygen-free environment to produce renewable energy (biogas) and other biomaterials.

**Distillation towers/columns:** Equipment used to refine and separate purified products and aqueous streams during biofuel production.

**Double layer capacitors:** Capacitors with enhanced cycle stability and extremely high power capability; very efficient energy storage capability compared to traditional capacitors and batteries.

**Dryers:** Equipment used to remove moisture from a liquid/solid mixture. Dryers vary in application and function (rotating drum dryers, rotary dryers, flash dryers, fluidized bed dryers, spray dryers, conveyor dryers, tray dryers, thin-film dryers).

**Emission control:** Technologies that aid in reducing the amount of air pollutants, including greenhouse gases, released into the atmosphere.

**Energy efficiency:** Energy efficiency is a way of managing and restraining the growth in energy consumption. Something is more energy efficient if it delivers more services for the same energy input, or the same services for less energy input.

**Energy storage:** Machinery or equipment that stores energy to be used at a later point in time.

**Environmental measurement apparatus:** Equipment or instruments that assist in data collection involving the assessment of chemical, physical, or biological factors in the environment.

**Environmental employment:** Work that directly or indirectly contributes to preserving or restoring environmental quality. For example, this may include jobs that produce goods or provide services that help to: protect ecosystems and biodiversity; reduce the use of energy, materials, and water consumption in manufacturing processes; lower the carbon expenditure of industrial processes, or; minimize or altogether avoid generation of waste and pollution.

**Flywheels:** A rotating mechanical device that is used to store rotational energy.

**Gas leak detection:** A device that detects the presence of gases in an area, often as part of a safety system. This type of equipment is used to detect a gas leak and interface with a control system so a process can be automatically shut down. Gas detectors can be used to detect combustible, flammable and toxic gases, and oxygen depletion.

**Glycerol:** An organic waste generated by the biodiesel industry.

**Green building certification:** Refers to a certification body that approves a construction project as environmentally responsible and resource-efficient throughout a structure's life-cycle.

**Low emitting burners:** High-efficiency burners that minimize the amount of pollutants produced during combustion.

**Management systems:** Software systems that employ artificial intelligence or rules based on process knowledge to control energy distribution.

**Methanol:** A component used in the production of biodiesel.

**Mixers:** Industrial mixers are able to blend combinations of solids, gases and liquids. Mixing is usually completed in either single-phase or multi-phase formats.

**Phasor measurement unit:** A phasor measurement unit (PMU) is a device which measures the electrical waves on a power grid to monitor and control load and detect faults.

**Pumped hydro:** A system for generating hydroelectric power for peak periods by pumping water from a lower to an upper reservoir during low-demand/off-peak periods (charging). When required, the water flows back from the upper to the lower reservoir to produce electricity (discharging).

**Shredders:** Equipment used to cut, shear, tear, slice, or rip apart materials into smaller pieces typically in a strip or chip-like output shape. Shredders may be used to process forestry and agricultural biomass to convert it into a more useable form for further biofuel or biomaterial processing.

**Smart grid:** Adaptions to a conventional power grid, allowing two-way communications, control and automation capabilities to make it more reliable, flexible, efficient, clean, safe and customer-friendly.

**Smart inverters:** Inverters that enable the integration of distributed photovoltaic power generation into the power grid.

**Storage systems:** Includes above and underground types of storage systems. The tanks can be used for storage, mixing, or as vessels for chemical processes.

**Succinic acid:** Bio-based chemical building block derived from plants.

**Superconducting magnetic energy storage:** Energy storage using a magnetic field created by the flow of direct current in a superconducting coil kept below its superconducting critical temperature.

**Thermal storage systems:** Encompasses a wide range of technologies that allow thermal energy to be collected and stored for later use. Storage mediums include water, bedrock, deep aquifers, and phase-change materials.

**Washers:** Refers to the washing step of biofuel refining where impurities are adsorbed using a material such as magnesium silicate. Purified biodiesel liquid is then separated from the solid dry wash adsorbent and filtered, resulting in clarified biodiesel.

**Ultrasonic detection:** Ultrasonic level measurement devices employ sound waves for detection of liquid levels.