

# The Daily

## Statistics Canada

Monday, April 27, 2015  
Released at 8:30 a.m. Eastern time

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Businesses in Canada anticipate spending \$15.5 billion to perform research and development in 2015, down 2.6% from 2014 intentions of \$15.9 billion and 3.6% lower than the actual expenditures of \$16.0 billion in 2013.

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## Releases

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### **Industrial research and development characteristics, 2015 (intentions)**

#### **Spending intentions on industrial research and development, 2015**

Businesses in Canada anticipate spending \$15.5 billion to perform research and development (R&D) in 2015, down 2.6% from 2014 intentions of \$15.9 billion and 3.6% lower than the actual expenditures of \$16.0 billion in 2013.

Businesses perform R&D to create and commercialize new technology, products and processes. Industrial R&D is composed of two categories: current and capital R&D spending. Current R&D spending of \$14.2 billion is expected to account for 92% of industrial R&D spending in 2015.

Wages and salaries are projected to total \$9.6 billion in 2015 and will constitute the largest component of current R&D expenditures. The remaining current costs, such as the purchase of non-capital materials, contracts for on-site consultants and products to support R&D are forecast to be \$4.6 billion.

Spending on R&D capital, such as machinery, equipment, land and buildings, is anticipated to be \$1.3 billion, accounting for 8% of total industrial R&D spending in 2015.

#### **Research and development spending intentions by industry, 2015**

The manufacturing sector is anticipated to spend \$6.4 billion in 2015, or 42% of all industrial R&D. Manufacturing R&D performance remains well below its 2001 peak of \$9.2 billion.

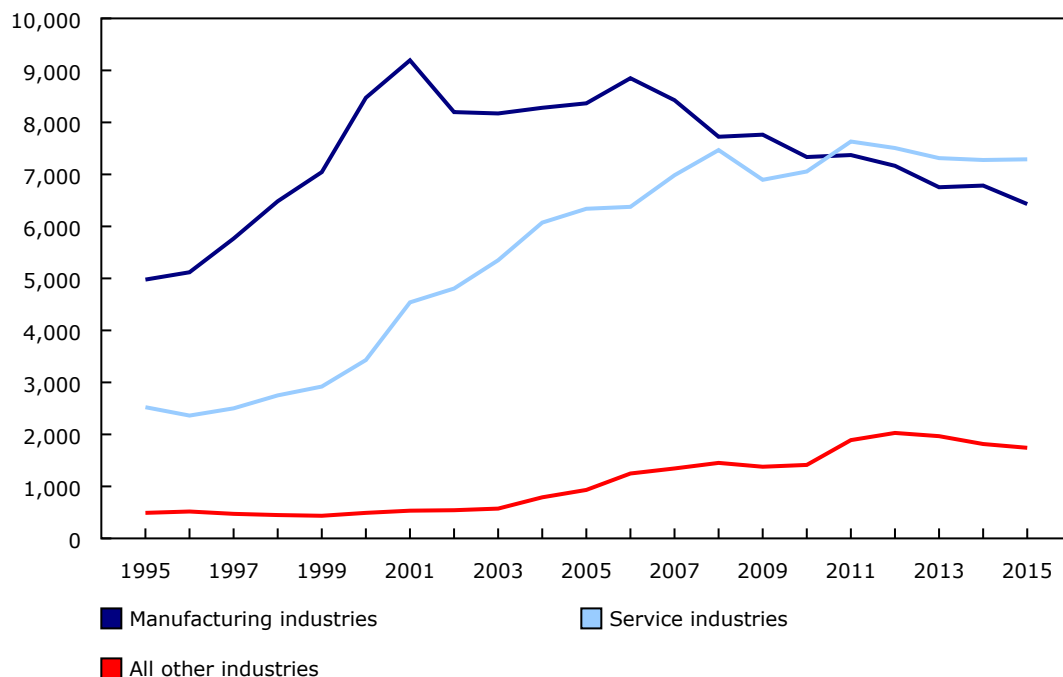
Service industries are anticipated to spend \$7.3 billion or almost half (47%) of all industrial R&D in 2015. The most recent peak in R&D spending in service industries was \$7.6 billion in 2011. R&D performance in the service industries has stabilized since then.

R&D spending in mining, quarrying and oil and gas extraction is anticipated to be \$1.4 billion in 2015, down \$246 million from its most recent peak of \$1.6 billion in 2012.

The agriculture, forestry, fishing and hunting; utilities; and construction sectors will perform the remaining \$380 million of industrial R&D.

**Chart 1**  
**Industrial research and development expenditures by industrial sector, 1995 to 2015**

millions of current dollars



Source(s): CANSIM table [358-0024](#).

### Characteristics of industrial research and development performance, 2013

In 2013, the most recent year for which these R&D characteristics data are available, companies performing R&D funded \$12.8 billion or 80% of total industrial R&D (\$16.0 billion).

Foreign sources were the second-largest source of funds for industrial R&D in 2013 at \$1.7 billion or 11%. The remaining \$1.5 billion of industrial R&D funding came from governments, private non-profit organizations as well as other companies and organizations.

Canadian-controlled businesses performed \$10.1 billion or 63% of industrial R&D in 2013, while foreign-controlled businesses performed \$5.9 billion or 37%.

American-controlled businesses performed \$3.6 billion or 62% of the R&D performed by foreign-controlled businesses in Canada in 2013.

#### Energy-related research and development

Businesses in Canada spent \$2.0 billion on energy-related R&D in 2013, unchanged from 2012.

Fossil fuel-related R&D performance accounted for over two-thirds of all energy-related R&D in 2013 at \$1.4 billion, down slightly from \$1.5 billion in 2012.

R&D for energy efficiency-related technologies reached \$128 million in 2013, up from \$80 million in 2012.

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## Industrial research and development performance in engineering and technology

The top four fields of engineering and technology accounted for two-thirds of all industrial R&D in Canada in 2013: electrical engineering, electronic engineering and information technology (\$3.5 billion); other engineering and technology (\$2.7 billion); software engineering (\$2.6 billion) and mechanical engineering (\$2.0 billion).

R&D spending in emerging technologies, such as biotechnology and nanotechnology, was \$404 million or 3% of industrial R&D in 2013.

Medical biotechnology R&D spending totalled \$295 million and accounted for three-quarters (76%) of the \$386 million performed by businesses on biotechnology-related R&D in 2013.

Nanotechnology-related R&D spending was \$18 million in 2013, up from \$14 million the previous year.

## Industrial research and development personnel

Most industrial R&D is performed by scientists and engineers, who are assisted by technical and support staff. There were 89,165 full-time equivalent scientists, engineers and R&D administrators in 2013, accounting for two-thirds (67%) of industrial R&D personnel.

Technicians and technologists—technically trained personnel who support the activities of scientists and engineers—accounted for 33,551 full-time equivalents, while other support personnel constituted the remaining 9,615 full-time equivalents.

## Overview of industrial research and development spending by province

Ontario and Quebec continued to account for the majority of the \$16.0 billion of industrial R&D performed in Canada in 2013. Spending on industrial R&D declined 7.0% to \$7.0 billion in Ontario and edged down 0.6% to \$4.7 billion in Quebec.

In 2013, 97% of R&D performance in Ontario was distributed between services (\$3.5 billion) and manufacturing (\$3.3 billion).

In Quebec, 95% of industrial R&D spending was performed by manufacturers (\$2.6 billion) or by businesses in service industries (\$1.8 billion).

About \$2.0 billion worth of industrial R&D was performed in Alberta in 2013, primarily by mining, quarrying and oil and gas extraction (\$1.1 billion) and in service industries (\$687 million).

Service industries performed over half (61% or \$993 million) of the \$1.6 billion spent on industrial R&D in British Columbia in 2013.

Among the remaining provinces, \$283 million was spent on industrial R&D in Saskatchewan in 2013, with mining, quarrying and oil and gas extraction performing \$113 million and service industries \$103 million. Industrial R&D performed in Manitoba totalled \$232 million, led by service industries at \$154 million, followed by manufacturers (\$73 million).

In Atlantic Canada, businesses performed \$222 million in industrial R&D, down 18.7% from 2012. Newfoundland and Labrador led in industrial R&D performance spending with \$81 million, followed by New Brunswick (\$60 million), Nova Scotia (\$60 million) and Prince Edward Island (\$20 million).

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**Note to readers**

*These data are subject to revision.*

**Reference year 2013 collection period**

*Data for industrial research and development (R&D) 2015 and 2014 spending intentions and 2013 actual spending were collected from September 2, 2014, to February 5, 2015. Most of the data collection took place before the sudden decline in oil prices that occurred in late 2014.*

*Data for 2013 on employment in R&D activities, sources of funds for R&D, industrial R&D spending by province, extramural R&D payments, and technology payments and receipts are now available.*

*Spending intentions for 2014 and 2015 are indications of the direction of R&D investments. Revised R&D expenditures for 2011 to 2013 are now available.*

*Data from the 2013 Energy Research and Development Expenditures by Area of Technology survey ([4205](#)) are also available.*

**Changes to Statistics Canada's industrial research and development statistics program**

*For survey reference year 2014, the industrial R&D statistics program is undergoing conceptual, methodological, processing and output changes. For more information, see the note to readers in the publication *Industrial Research and Development: Intentions* ([88-202-X](#)).*

**Available in CANSIM: tables [358-0024](#), [358-0140](#), [358-0141](#), [358-0161](#) and [358-0205 to 358-0214](#).**

Table 358-0024: Industrial research and development (R&D) expenditures and personnel, Canada.

Table 358-0140: Industrial R&D expenditures and personnel, by field of science or technology.

Table 358-0141: Business enterprise extramural payments for research and development, by location and sector of recipients. (New)

Table 358-0161: Industrial R&D expenditures and personnel, provinces and territories.

Table 358-0206: Business enterprise extramural payments for R&D, by location of recipient.

Tables 358-0205, 358-0207 to 358-0211: Business enterprise intramural R&D expenditures, selected characteristics.

Table 358-0212: Business enterprise expenditures and payments for intellectual property and other technology assistance.

Table 358-0213: Business enterprise foreign receipts and payments for technological services.

Table 358-0214: Industrial energy R&D expenditures.

**Definitions, data sources and methods: survey numbers [4201](#) and [4205](#).**

The publication *Industrial Research and Development: Intentions, 2014* ([88-202-X](#)), is now available from the *Browse by key resource* module of our website under *Publications*.

For more information, contact us (toll-free 1-800-263-1136; 514-283-8300; [infostats@statcan.gc.ca](mailto:infostats@statcan.gc.ca)).

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## Supply and disposition of refined petroleum products, January 2015

### Receipts and imports rise

Canadian refineries received 8.8 million cubic metres of crude oil in January, up 7.2% compared with the same month in 2014.

Refinery receipts of domestic crude oil totalled 5.9 million cubic metres, an increase of 8.4% from the same month a year earlier.

Crude oil imports were 2.8 million cubic metres in January, up 4.8% from January 2014. Imports represented 32.4% of total crude oil received at refineries in Canada.

### Sales fall

Domestic sales of refined petroleum products totalled 8.7 million cubic metres in January, down 1.4% from January 2014.

Refinery production totalled 9.8 million cubic metres, up 4.3% from January 2014.

#### **Note to readers**

*The Monthly Refined Petroleum Products survey collects data on the activities of all Canadian refineries involved in the production of refined petroleum products (North American Industry Classification System [NAICS] 324000) and of selected major distributors of these products (NAICS 412000).*

*Domestic sales include all sales by reporting companies, excluding exports and sales to other reporting companies. Refinery production is measured at a net-yield level, for example, after exchanges between refinery processes.*

*Refinery receipts of crude oil and equivalent hydrocarbons (condensates and pentanes plus) are for refinery consumption or storage from domestic and foreign sources.*

*Data from January 2013 to December 2014 have been revised.*

**Available in CANSIM: tables [134-0001](#) to [134-0004](#).**

**Definitions, data sources and methods: survey number [2150](#).**

For more information, or to enquire about the concepts, methods or data quality of this release, contact us (toll-free 1-800-263-1136; 514-283-8300; [infostats@statcan.gc.ca](mailto:infostats@statcan.gc.ca)) or Media Relations (613-951-4636; [mediahotline@statcan.gc.ca](mailto:mediahotline@statcan.gc.ca)).

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## New products and studies

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### New products

**Industrial Research and Development: Intentions, 2015**  
Catalogue number **88-202-X** (HTML | PDF)



### **Statistics Canada's official release bulletin**

Catalogue 11-001-X.

Published each working day by the Communications Division, Statistics Canada, 10G, R.H. Coats Building, 100 Tunney's Pasture Driveway, Ottawa, Ontario K1A 0T6.

To access or subscribe to *The Daily* on the Internet, visit our website at <http://www.statcan.gc.ca>.

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