

Service bulletin

Engineering Services

2009



Highlights

- Operating revenues earned by engineering firms were \$21.4 billion in 2009, down 3.9% from 2008.
- This was the only decline in industry revenues in recent years, and coincided with a significant decline in the gross domestic product (GDP) for petrochemical manufacturing (-29.3%) and mining (-20.7%) in 2009. There was also lower production in the energy sector in 2009 compared to the previous year, specifically in mining, oil and gas extraction.
- The industry's operating expenses also decreased by 1.9% in 2009, leading to an 11.0% profit margin, down from 12.8% in the previous year.
- The majority of the sales of these firms were derived from industrial and manufacturing projects (35.9%). Transportation projects generated 10.4% of sales, power generation, transmission and distribution yielded 7.2%, and municipal utility projects comprised 5.5%. The remaining sales came from building projects, industrial waste projects and other related services.
- Industrial and manufacturing engineering projects were mainly composed of petroleum and petrochemical projects (22.1%), followed by mining and metallurgy (7.3%).
- Firms in Alberta accounted for 30.8% of the revenues, followed by Ontario (27.3%), Quebec (19.7%) and British Columbia (13.5%).
- The overall decline was driven mostly by a drop in operating revenues in Alberta (-14.4%). This could be attributed to a decrease in sales of petroleum and mining in 2009 compared to 2008.
- The Raw Materials Price Index shows a significant drop in the prices of crude mineral oil (-35.6%) and natural gas (-22.0%) from 2008 to 2009.

Statistical tables

Table 1

Summary statistics for the engineering services industry, by province and territory, 2007 to 2009

	Operating revenue	Operating expenses	Salaries, wages and benefits	Operating profit margin
	millions of dollars			percent
2009^p				
Newfoundland and Labrador	340.6	302.5	90.4	11.2
Prince Edward Island	x	x	x	x
Nova Scotia	309.9	284.3	129.3	8.2
New Brunswick	400.9	362.7	141.0	9.5
Quebec	4,225.3	3,775.2	1,526.0	10.7
Ontario	5,847.3	5,297.5	2,482.9	9.4
Manitoba	322.8	281.1	131.8	12.9
Saskatchewan	429.4	381.2	178.7	11.2
Alberta	6,594.2	5,706.2	2,340.4	13.5
British Columbia	2,885.5	2,612.5	1,196.5	9.5
Yukon	15.0	13.0	6.1	13.4
Northwest Territories	29.8	26.9	10.6	9.5
Nunavut	x	x	x	x
Canada	21,441.9	19,077.4	8,245.6	11.0
2008^r				
Newfoundland and Labrador	316.3	279.1	94.2	11.8
Prince Edward Island	x	x	x	x
Nova Scotia	306.7	273.5	128.1	10.8
New Brunswick	x	x	x	x
Quebec	3,861.3	3,354.8	1,485.4	13.1
Ontario	5,996.1	5,261.7	2,513.2	12.2
Manitoba	287.0	257.6	128.0	10.2
Saskatchewan	332.3	286.4	143.6	13.8
Alberta	7,702.9	6,694.4	2,655.8	13.1
British Columbia	3,042.3	2,662.6	1,231.1	12.5
Yukon	19.1	14.7	6.3	22.7
Northwest Territories	33.0	28.3	12.0	14.2
Nunavut	x	x	x	x
Canada	22,301.5	19,453.8	8,538.8	12.8
2007^r				
Newfoundland and Labrador	266.1	241.4	105.4	9.3
Prince Edward Island	x	x	x	x
Nova Scotia	263.6	248.3	110.1	5.8
New Brunswick	x	x	x	x
Quebec	3,931.3	3,472.7	1,336.2	11.7
Ontario	4,824.8	4,252.3	2,084.1	11.9
Manitoba	208.3	190.9	100.1	8.3
Saskatchewan	247.9	213.4	106.8	13.9
Alberta	6,404.8	5,593.0	2,266.2	12.7
British Columbia	2,922.6	2,448.3	1,062.2	16.2
Yukon	20.0	15.6	6.0	22.0
Northwest Territories	F	F	F	F
Nunavut	x	x	x	x
Canada	19,719.5	17,210.9	7,315.5	12.7

Note(s): According to the North American Industry Classification System (NAICS 54133). See "Data sources, definitions and methodology" at the end of tables for definition of terms. Due to rounding, components may not add to total.

Table 2
Operating expenses for the engineering services industry, Canada, 2007 to 2009

	2007 ^r	2008 ^r	2009 ^p
	percent		
Total labour remuneration	43.5	44.1	43.3
Commissions paid to non-employees	F	x	1.1
Professional and business services fees	2.4	3.0	2.6
Subcontract expenses	11.0	12.0	12.8
Charges for services provided by your head office	F	F	1.0
Cost of goods sold	21.7	17.7	19.7
Office supplies	2.3	2.0	1.8
Rental and leasing	3.8	3.9	4.1
Repair and maintenance	1.7	1.4	1.4
Insurance	1.1	1.1	1.1
Advertising, marketing and promotions	F	F	F
Travel, meals and entertainment	2.0	2.3	2.2
Utilities and telecommunications expenses	F	1.1	F
Property and business taxes, licences and permits	F	F	F
Royalties, rights, licensing and franchise fees	F	x	F
Delivery, warehousing, postage and courier	F	F	F
Financial services fees	F	F	F
Amortization and depreciation of tangible and intangible assets	2.2	2.2	2.2
Bad debts	F	F	F
All other expenses	4.5	4.6	4.1

Note(s): According to the North American Industry Classification System (NAICS 54133). See "Data sources, definitions and methodology" at the end of tables for definition of terms. Due to rounding, numbers may not sum exactly to totals. Estimates for the most recent year are preliminary. Preliminary data are subject to revision. The smallest firms, in terms of revenues earned, are not included in the estimates. These firms account for a relatively small portion of total industry revenues.

Table 3
Distribution of operating revenue by type of client, for the engineering services industry, Canada, 2007 to 2009

	Clients in Canada	Businesses (incl. engineering firms)	Individuals and households	Governments and public institutions	Clients outside Canada
	percent				
Engineering services					
2009 ^p	84.8	62.7	1.6	20.4	15.2
2008 ^r	84.4	64.1	1.9	18.4	15.6
2007 ^r	82.1	60.4	1.8	19.6	17.7

Note(s): According to the North American Industry Classification System (NAICS 54133). Based on a sample of firms (weighted). The smallest firms, in terms of revenues earned, are not included in the estimates. These firms account for a relatively small portion of total industry revenues. Due to rounding, components may not add to total.

Table 4
Distribution of operating revenue by type of service, Canada, 2007 to 2009

	2007 ^r	2008 ^r	2009 ^p
	percent		
Engineering Services			
Residential building engineering projects	4.7	3.4	3.9
Commercial, public and institutional building engineering projects	9.3	8.5	9.4
Industrial and manufacturing engineering projects			
Mining and metallurgical	6.8	9.4	7.3
Petroleum and petrochemical	23.1	27.1	22.1
Pulp and paper	1.6	1.2	1.7
Industrial machinery	2.9	1.5	1.3
Electronic and electrical equipment	1.3	1.0	0.5
Transportation equipment	0.8	0.7	0.4
Other industrial and manufacturing engineering projects	3.5	2.9	2.7
Transportation engineering projects	10.1	9.7	10.4
Municipal utility engineering projects	5.9	5.1	5.5
Power generation, transmission and distribution engineering projects	6.4	6.2	7.2
Telecommunications and broadcasting engineering projects	0.8	0.8	0.6
Hazardous and industrial waste engineering projects	1.1	2.0	2.6
Engineering advisory services	0.7	0.8	0.9
Other engineering projects or services	5.6	5.2	7.0
Secondary activities			
Project management services	5.6	4.7	5.8
Construction services	4.0	3.6	4.0
Environmental consulting services	3.0	3.5	3.7
Other sales	2.9	2.7	3.0

Note(s): According to the North American Industry Classification System (NAICS 54133). See "Data sources, definitions and methodology" at the end of tables for definition of terms. The smallest firms, in terms of revenues earned, are not included in the estimates. These firms account for a relatively small portion of total industry revenues. Due to rounding, components may not add to total.

Table 5
Distribution of foreign fee income by geographic region, 2007 to 2009

	2007 ^r	2008 ^r	2009 ^p
	percent		
United States	44.6	32.9	31.4
Mexico	1.2	2.6	4.0
Other	54.2	64.5	64.6

Note(s): According to the North American Industry Classification System (NAICS 54133). See "Data sources, definitions and methodology" at the end of tables for definition of terms. The smallest firms, in terms of revenues earned, are not included in the estimates. These firms account for a relatively small portion of total industry revenues. Due to rounding, components may not add to total.

Data sources, definitions and methodology

Description

This annual sample survey collects data required to produce economic statistics for the engineering industry in Canada.

Data collected from businesses are aggregated with information from other sources to produce official estimates of national and provincial economic production for this industry.

Survey estimates are made available to businesses, governments, investors, associations, and the public. The data are used to monitor industry growth, measure performance, and make comparisons to other data sources to better understand this industry.

Target population

The target population consists of all establishments classified to the engineering services industry (NAICS 541330) according to the North American Industry Classification System (NAICS) during the reference year. This industry comprises establishments primarily engaged in applying principles of engineering in the design, development and utilization of machines, materials, instruments, structures, processes and systems. The assignments undertaken by these establishments may involve any of the following activities: the provision of advice, the preparation of feasibility studies, the preparation of preliminary and final plans and designs, the provision of technical services during the construction or installation phase, the inspection and evaluation of engineering projects and related services.

Sampling

This is a sample survey.

The frame is the list of establishments from which the portion eligible for sampling is determined and the sample is taken. The frame provides basic information about each firm including address, industry classification, and information from administrative data sources. The frame is maintained by Statistics Canada's Business Register Division and is updated using administrative data.

The basic objective of the survey is to produce estimates for the whole industry - incorporated and unincorporated businesses. The data come from two different sources: a sample of all businesses with revenue above or equal to a certain threshold (note: the threshold varies between surveys and sometimes between industries and provinces in the same survey) for which either survey or administrative data may be used; and administrative data only for businesses with revenue below the specified threshold. It should be noted that only financial information is available from businesses below the threshold; e.g., revenue, and expenses such as depreciation and salaries, wages and benefits. Detailed characteristics are collected only for surveyed establishments.

Prior to the selection of a random sample, establishments are classified into homogeneous groups (i.e., groups with the same NAICS codes and same geography). Quality requirements are targeted, and then each group is divided into sub-groups called strata: take-all, must-take, and take-some.

The take-all stratum represents the largest firms in terms of performance (based on revenue) in an industry. The must-take stratum is comprised of units selected based on complex structural characteristics (multi-establishment, multi-legal, multi-NAICS, or multi-province enterprises). All take-all and must-take firms are selected to the sample. Units in the take-some strata are subject to simple random sampling.

The effective sample size for reference year 2009 was 708 collection entities.

Definition

Operating revenue excludes investment income, capital gains, extraordinary gains and other non-recurring items.

Operating expenses exclude write-offs, capital losses, extraordinary losses, interest on borrowing, and other non-recurring items.

Operating profit margin is derived as follows: operating revenue minus operating expenses, expressed as a percentage of operating revenue. The derived figure excludes corporation income tax paid by incorporated businesses and individual income tax paid by unincorporated businesses. For unincorporated businesses, operating profit margin includes unpaid remuneration to partners and proprietors, which is not recorded as salaries, wages and benefits. Therefore the profit estimate will be higher in industries where unincorporated proprietorships and partnerships are significant contributors.

Salaries, wages and benefits include vacation pay and commissions for all employees for whom a T4 slip was completed. This category also includes the employer portion of employee benefits for items such as Canada/Quebec Pension Plan or Employment Insurance premiums. Salaries and wages do not include working owners' dividends

nor do they include the remuneration of owners of unincorporated business. Therefore the relative level of salaries, wages and benefits will be lower in industries where unincorporated businesses are significant contributors.

An active **statistical establishment** is one production entity or the smallest grouping of production entities which produces as homogeneous a set of goods and/or services as possible; which does not cross provincial boundaries; and for which records provide data on the value of output together with the cost of principal intermediate inputs used and cost and quantity of labour resources used to produce the output.

Quality evaluation

Prior to dissemination, combined survey results are analyzed for overall quality; in general, this includes a detailed review of individual responses (especially for the largest companies), an assessment of the general economic conditions portrayed by the data, historic trends, and comparisons with other data sources.

Disclosure control

Statistics Canada is prohibited by law from releasing any data which would divulge information obtained under the Statistics Act that relates to any identifiable person, business or organization without the prior knowledge or the consent in writing of that person, business or organization. Various confidentiality rules are applied to all data that are released or published to prevent the publication or disclosure of any information deemed confidential. If necessary, data are suppressed to prevent direct or residual disclosure of identifiable data.

Data accuracy

Of the units contributing to the estimate, the weighted response rate was 87.0%. CVs were calculated for each estimate and are available upon request.

Related products

Selected CANSIM tables from Statistics Canada

360-0005	Engineering services, summary statistics, by North American Industry Classification System (NAICS), annual (75 series)
360-0012	Engineering services, operating expenses, by North American Industry Classification System (NAICS), annual (percent) (21 series)
360-0013	Engineering services, sales by type of client based on the North American Industry Classification System (NAICS), annual (percent) (5 series)

Survey(s)

Definitions, data sources and methods: survey number 2439 - Annual Survey of Service Industries: Engineering Services

Publications

Service Industries Newsletter, Catalogue no. 63-018-X.

Analytical paper series - Service Industries Division, Catalogue no. 63F0002X.

Release date: April 2011

Symbols

The following standard symbols are used in Statistics Canada publications:

.	not available for any reference period
..	not available for a specific reference period
...	not applicable
0	true zero or a value rounded to zero
0 ^s	value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
P	preliminary
r	revised
x	suppressed to meet the confidentiality requirements of the <i>Statistics Act</i>
E	use with caution
F	too unreliable to be published

To access this product

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