Natural Resources Canada | Ressources naturelles Canada

SURVEY OF COMMERCIAL AND INSTITUTIONAL ENERGY USE – BUILDINGS 2009

DETAILED STATISTICAL REPORT
DECEMBER, 2012

Canada

Natural Resources Canada's Office of Energy Efficiency
Leading Canadians to Energy Efficiency at Home, at Work and on the Road

Aussi disponible en français sous le titre :
Enquête sur l'utilisation commerciale et institutionnelle d'énergie 2009 – bâtiment : rapport statistique détaillé

Cat. No. M144-4/1-2012 (Print)
ISBN 978-1-100-54453-3

Cat. No. M144-4/1-2012E-PDF (On-line)
ISBN 978-1-100-21536-5

To obtain additional copies of this or other free publications on energy efficiency, contact:

Energy Publications
Office of Energy Efficiency
Natural Resources Canada
c/o St. Joseph Communications
Order Processing Unit
1165 Kenaston Street
PO Box 9809, Stn T
Ottawa ON K1G 6S1
Tel.: 1-800-387-2000 (toll-free)
Fax: 613-740-3114
TTY: 613-996-4397 (teletype for the hearing-impaired)

You can also view or order most Office of Energy Efficiency publications on-line. Visit our Virtual Library at **oee.nrcan.gc.ca/publications**. The Office of Energy Efficiency's Web site is at **oee.nrcan.gc.ca**.

Printed in Canada / Imprimé au Canada
Recycled paper

SURVEY OF

COMMERCIAL AND INSTITUTIONAL ENERGY USE – BUILDINGS 2009

DETAILED STATISTICAL REPORT
DECEMBER, 2012

Contents

Foreword 1

How to read these tables 3

Scope of the report 3

Table layout 3

Data quality 4

Regional information 5

Highlights 7

Chapter 1. Canada 9

Table 1.1. Building characteristics and energy use by climate zone 10

Table 1.2. Building energy use by fuel type and climate zone 10

Table 1.3. Building characteristics and energy use by primary activity of the building 11

Table 1.4. Building energy use by primary activity of the building 12

Table 1.5. Building characteristics and energy use by number of floors 13

Table 1.6. Building characteristics and energy use by building size 13

Table 1.7. Building characteristics and energy use by year of construction 14

Table 1.8. Building characteristics and energy use by hours of operation 14

Table 1.9. Canadian commercial buildings by type of renovation 15

Table 1.10. Canadian commercial buildings by energy efficiency feature 16

Table 1.11. Building characteristics by energy source used 17

Table 1.12. Building characteristics by main energy source for space heating 18

Table 1.13. Building characteristics by main energy source for space cooling 18

Table 1.14. Building characteristics by main energy source for water heating 19

Table 1.15. Building characteristics and energy use by primary activity and size 20

Table 1.16. Building characteristics and energy use by primary activity and year of construction 24

Table 1.17. Building characteristics and energy use by primary activity and number of floors 30

Table 1.18. Building characteristics and energy use by primary activity and number of hours of operation 34

Table 1.19. Building characteristics by primary activity and type of renovation 38

Chapter 2. Climate zone and region **45**
Table 2.1. Building characteristics and energy use by climate zone and size 46
Table 2.2. Building characteristics and energy use by climate zone and year of construction 48
Table 2.3. Building characteristics and energy use by climate zone and hours of operation 50
Table 2.4. Building characteristics and energy use by climate zone and primary activity 52
Table 2.5. Building characteristics by climate zone and type of renovation 54
Table 2.6. Building characteristics by climate zone and energy efficiency features 56

Chapter 3. Renovations **57**
Table 3.1. Characteristics of buildings with any type of renovation 58
Table 3.2. Characteristics of buildings with space heating renovations 59
Table 3.3. Characteristics of buildings with space cooling renovations 60
Table 3.4. Characteristics of buildings with lighting renovations 61
Table 3.5. Characteristics of buildings with windows/insulation renovations 62
Table 3.6. Characteristics of buildings with any other type of renovations 63

Chapter 4. Energy use **65**
Table 4.1. Characteristics of buildings using electricity 66
Table 4.2. Characteristics of buildings using natural gas 68
Table 4.3. Characteristics of buildings using distillates 70
Table 4.4. Characteristics of buildings using propane 72
Table 4.5. Characteristics of buildings using other fuels 74
Table 4.6. Characteristics of buildings that primarily use electricity for space heating 76
Table 4.7. Characteristics of buildings that primarily use natural gas for space heating 78
Table 4.8. Characteristics of buildings that primarily use distillates for space heating 80
Table 4.9. Characteristics of buildings that have no space cooling 82
Table 4.10. Characteristics of buildings that primarily use electricity for space cooling 84
Table 4.11. Characteristics of buildings that primarily use natural gas for space cooling 86
Table 4.12. Characteristics of buildings that have no water heating 88
Table 4.13. Characteristics of buildings that primarily use electricty for water heating 90
Table 4.14. Characteristics of buildings that primarily use natural gas for water heating 92
Table 4.15. Characteristics of buildings that primarily use distillates for water heating 94

Chapter 5. Energy efficiency features **97**
Table 5.1. Characteristics of buildings with energy efficiency features 98
Table 5.2. Characteristics of buildings with energy conservation awareness programs 99
Table 5.3. Characteristics of buildings with energy management control systems for HVAC 100
Table 5.4. Characteristics of buildings with energy management control systems for lighting 101

Appendix A. Methodology **103**
Introduction 104
Overview of the integrated survey 104

Appendix B. Glossary **109**

Appendix C. Descriptions of building activity **113**

Appendix D. Commercial and institutional building energy use survey – questionnaire **117**

Appendix E. Climate zones **125**

Appendix F. Regional information **129**
Table F-1. Building characteristics and energy use by region and size 130
Table F-2. Building characteristics and energy use by region and year of construction 132
Table F-3. Building characteristics and energy use by region and hours of operation 134
Table F-4. Building characteristics and energy use by region and primary activity 136

Foreword

The Survey of Commercial and Institutional Energy Use (SCIEU) combines the goals of two existing energy-use surveys: the Commercial and Institutional Consumption of Energy Survey (CICES) and the Commercial and Institutional Building Energy Use Survey (CIBEUS).

Every year Natural Resources Canada's Office of Energy Efficiency (OEE) estimates Canada's energy consumption by economic sector. The objective of the establishment-based component of the SCIEU is to produce statistical estimates of energy consumption for calendar year 2009 for the commercial and institutional (C&I) sector based on selected North American Industrial Classification System (NAICS) groupings. These estimates are then used as a key input into estimating the sector's contribution to Canada's overall end use energy consumption.

The OEE also develops policies and programs to encourage reducing energy consumption of C&I buildings. The objective of the buildings-based component of the SCIEU is to establish baseline energy consumption figures against which new policies and programs geared toward energy efficiency in C&I buildings can be measured. The buildings-based component of the SCIEU collects building characteristics and energy consumption estimates by building type and by climate zone.

This statistical report on the SCIEU 2009 buildings was prepared by Samuel Blais, Margaretta Do and Bing He, while overall direction was provided by Andrew Kormylo, of the Demand Policy and Analysis Division of the OEE. An electronic version of the publication is available on the OEE Web site at **oee.nrcan.gc.ca/statistics**.

For more information on this publication or the OEE's services, visit the Web site at **oee.nrcan.gc.ca**. You can also contact the OEE by e-mail at **euc.cec@nrcan-rncan.gc.ca** or by writing to

Office of Energy Efficiency
Natural Resources Canada
580 Booth Street
Ottawa ON K1A 0E4

How to read these tables

Scope of the report

This detailed statistical report provides estimates of the number of buildings, floor space, energy consumption and energy intensity at a desegregated level for the target population. The target population includes buildings in which at least 50 percent of the floor space is devoted to the following commercial or institutional activities:

- office buildings (non-medical)
- medical office buildings
- elementary and secondary schools
- nursing and residential care facilities
- warehouses
- hotels and motels
- hospitals
- food and beverage stores
- non-food retail stores
- other

For more detail on the survey and/or how the data is gathered by Statistics Canada, see Appendix A, Methodology.

Table layout

All data in this report are presented in a data table format. A typical data table is presented below.

For each category listed in the left column of a table, the building's characteristic is listed under the appropriate column on the right. All numbers in the tables are rounded to varying degrees according to the characteristic. As a result, these numbers may not add up to the totals indicated and may differ slightly among tables.

The example below provides data estimates for the number of buildings, floor space, energy use and energy intensity for the various climate zones. For example, if the reader wants to know how many C&I buildings were in the Atlantic climate zone in 2009, one would look for those categories in each column (see the yellow arrows) and locate the data estimate that lines up with both categories (see the yellow rectangle).

Example Table 1.1 – Building characteristics and energy use by climate zone

Climate zone	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
Atlantic	47 911	A	69.8	A	71.6	A	1.03	A
Great Lakes	233 880	A	417.3	A	437.2	A	1.05	A
Pacific Coast	38 092	A	64.6	A	64.0	B	0.99	A
Other	162 383	A	214.2	A	269.4	A	1.26	A
Canada	**482 266**	**A**	**765.9**	**A**	**842.2**	**A**	**1.10**	**A**

Data quality

It is important to note that the SCIEU is a survey, not a census, of the C&I sector. Despite the best efforts of Statistics Canada to maintain a high level of quality for each of the survey's phases, the data estimates produced are inevitably subject to variance in the level of confidence, as is the case with any survey. In addition, the SCIEU was not designed as a longitudinal survey in which the same respondents are surveyed for each survey iteration. Therefore, it is not advisable to compare these results with previous surveys of the C&I sector such as CIBEUS 2000, CICES 2007 or CICES 2008.

The quality of the data estimates must be assessed because the estimates represent 482 266 buildings but were created from a sample of 5704 buildings. When estimates are calculated, coefficients of variation are also provided. The coefficients indicate the reliability of the estimate. An example of the letter coding is circled in yellow in the table presented on the previous page. The letter coding is defined as follows.

Quality indicators associated with the coefficients of variation

Coefficient of variation	Quality indicator	Quality of estimate
20% or less	A	excellent
21 to 30%	B	good
31 to 40%	C	acceptable
more than 40%	F	too unreliable to be published
Confidential	X	suppressed to meet the confidentiality requirements of *The Statistics Act*

The data presented in this report are estimates. The real values differ from the estimates by less than two times the coefficient of variation (CV) 95 percent of the time. In other words, if the survey was repeated 20 times, the estimated value of the survey would be expected to fall between certain values 19 times out of 20.

The following example uses the total energy intensity for Canada presented in Table 1.1.

1.10 gigajoules per square metre (GJ/m^2)
and a Q.I. of A (CV = 3.45 percent)

Value {1 +/- 1.96 [CV]} = 1.10 {1 ±1.96 [3.45%]}
= {1.03, 1.17}

If this survey was repeated 20 times, it is expected that the Canadian total energy intensity would be between 1.03 and 1.17 GJ/m^2 19 times.

In the tables, there are some instances where there are poor quality indicators for floor space and poor quality indicators for energy use (sometimes even F quality and hidden values), yet total energy intensity will appear with a good quality indicator.

This may appear to be counterintuitive because the quality indicator is mostly based on the coefficient of variation and because the total energy intensity is a ratio. But if both estimates of each contributing record (the numerator and denominator) vary in the same direction, the resulting ratio is stable and can therefore have a better quality indicator.

The methodology used to calculate estimates, as well as to collect data, is summarized in Appendix A.

How to interpret the information labelled energy intensity in this report

Comparing the energy intensities of your building(s) with the reported total energy intensity in this report can be misleading, so you must differentiate between total energy intensity and average of energy intensities.

- **total energy intensity** – the sum of all the energy used by all buildings in the designated category divided by the sum of the floor space of all buildings in the same category
- **average of energy intensities** – the sum of the energy intensities of every category divided by the number of categories. Note that using a weighted average that uses floor space as the weight yields exactly the same value as total energy intensity.

The following example illustrates the differences in the various measures using the climate zone information from Table 1.1.

	Energy use (PJ)	Floor space (thousand m^2)	Energy intensity (GJ/m^2)
Atlantic	71.6	69 804.8	1.03
Great Lakes	437.2	417 291.5	1.05
Pacific Coast	64.0	64 606.3	0.99
Other	269.4	214 225.0	1.26
Canada	**842.2**	**765 927.5**	**1.10**

Total energy intensity (GJ/m^2)

$$\frac{\sum_i Energy\ use_i}{\sum_i Floor\ space_i} = \frac{842.2}{765\,927.5} = 1.10$$

Average of energy intensities (GJ/m^2)

$$\frac{\sum_i Energy\ intensity_i}{number\ of\ categories} = \frac{(1.03 + 1.05 + 0.99 + 1.26)}{4} = \frac{4.32}{4} = 1.08$$

In this example, it is easy to see that the average of energy intensity method results in a different estimate. In the end, all methods are mathematically sound. But the total energy intensity calculation is the more appropriate measure to analyse a sector of the economy.

Regional information

It is important to note that SCIEU 2009 was designed to produce reliable estimates at the national level and for four climate zones (see Appendix E). It was possible, however, to derive reasonable quality estimates for geographic regions. Note that these derived regional estimates are not as robust as the climate zone estimates and should, therefore, be used with caution.

Appendix F presents the derived regional estimates for building characteristics broken down by building size, year of construction, hours of operation and principal activity.

Highlights

There were more than 480 000 C&I buildings in Canada in 2009, occupying more than 750 million m^2 of floor space and using more than 840 petajoules (PJ) of energy, according to the SCIEU. Almost half (48.5 percent) of Canada's C&I buildings were in the Great Lakes climate zone in 2009.

The overall energy intensity of C&I buildings in Canada was 1.10 GJ/m^2 in 2009. In comparison, in 2009, the average household used 0.79 GJ/m^2 (*Energy Use Data Handbook 1990 to 2009*).

Office buildings (non-medical) represented 17.3 percent of all C&I buildings.

More than 34 percent of all C&I buildings in Canada were built between 1970 and 1989.

Natural gas was the primary energy source used for space heating by the majority (54.0 percent) of C&I buildings.

Nearly half (45.6 percent) of all C&I buildings had some type of renovation done in the last five years.

More than half (55.2 percent) of all C&I buildings had some form of energy efficiency feature[1] in place in 2009.

[1] energy conservation awareness program, energy management control system for heating, ventilating and cooling and/or lighting

CANADA

Table 1.1 – Building characteristics and energy use by climate zone

Climate zone	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
Atlantic	47 911	A	69.8	A	71.6	A	1.03	A
Great Lakes	233 880	A	417.3	A	437.2	A	1.05	A
Pacific Coast	38 092	A	64.6	A	64.0	B	0.99	A
Other*	162 383	A	214.2	A	269.4	A	1.26	A
Canada	**482 266**	**A**	**765.9**	**A**	**842.2**	**A**	**1.10**	**A**

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Other includes all other Canadian climate zones not listed.

Table 1.2 – Building energy use by fuel type and climate zone

Climate zone	Electricity (PJ)	Q.I.	Natural gas (PJ)	Q.I.	Distillates** (PJ)	Q.I.	Propane (PJ)	Q.I.	Other fuel*** (PJ)	Q.I.
Atlantic	39.0	A	5.6	B	21.6	B	2.3	C	3.0	B
Great Lakes	217.6	A	180.0	A	8.2	B	3.0	C	28.3	B
Pacific Coast	33.2	A	29.4	B	–	F	–	F	0.5	C
Other*	102.4	A	154.1	A	–	F	–	F	–	F
Canada	**392.3**	**A**	**369.1**	**A**	**35.1**	**B**	**–**	**F**	**37.2**	**B**

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Other includes all other Canadian climate zones not listed.

** Distillates include light fuel oil, diesel and kerosene.

*** Other fuel includes all other fuels not listed.

Table 1.3 – Building characteristics and energy use by primary activity of the building

Primary activity	Buildings		Floor space		Energy use		Energy intensity	
		Q.I.	(millions of m^2)	Q.I.	(PJ)	Q.I.	(GJ/m^2)	Q.I.
Office building (non-medical)	83 583	A	147.5	A	176.6	A	1.20	A
Medical office building	10 525	A	9.6	A	10.5	A	1.09	A
Elementary or secondary school	18 425	A	83.6	A	64.4	A	0.77	A
Nursing or residential care facility	6 482	A	25.0	B	39.1	B	1.56	A
Warehouse	32 879	A	83.0	A	55.0	A	0.66	A
Hotel or motel	9 963	C	19.7	B	26.5	C	1.35	A
Hospital	752	A	15.1	A	36.5	A	2.42	A
Food or beverage store	40 403	A	29.3	A	82.7	A	2.82	A
Non-food retail store	56 750	A	68.9	A	65.2	A	0.95	A
Other*	222 505	A	284.3	A	285.8	A	1.01	A
Canada	**482 266**	**A**	**765.9**	**A**	**842.2**	**A**	**1.10**	**A**

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Other includes all other commercial buildings. See Appendix C for more details.

Table 1.4 – Building energy use by primary activity of the building

Primary activity	Electricity		Natural gas		Distillates**		Propane		Other fuel***	
	(PJ)	Q.I.	(PJ)	Q.I.	(PJ)	Q.I.	(PJ)	Q.I.	(PJ)	Q.I.
Office building (non-medical)	101.1	A	63.4	A	2.3	B	–	F	–	F
Medical office building	5.4	A	4.7	B	0.1	B	–	F	0.2	C
Elementary or secondary school	24.1	A	34.7	A	4.8	B	–	F	X	X
Nursing or residential care facility	14.9	B	19.8	B	0.9	A	0.1	C	–	F
Warehouse	24.9	A	29.4	A	0.5	C	–	F	X	X
Hotel or motel	11.0	C	–	F	–	F	–	F	–	F
Hospital	12.6	A	18.2	A	3.7	C	–	F	1.9	B
Food or beverage store	45.2	A	35.7	A	0.8	C	1.0	C	X	X
Non-food retail store	31.7	A	29.6	B	–	F	–	F	–	F
Other*	121.4	A	120.5	A	–	F	–	F	21.5	B
Canada	**392.3**	**A**	**369.1**	**A**	**35.1**	**B**	**–**	**F**	**37.2**	**B**

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Other includes all other commercial buildings. See Appendix C for more details.

** Distillates include light fuel oil, diesel and kerosene.

*** Other fuel includes all other fuels not listed.

Table 1.5 – Building characteristics and energy use by number of floors

Floors	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
1	229 475	A	227.9	A	269.7	A	1.18	A
2	147 645	A	220.6	A	215.2	A	0.98	A
3	73 782	A	135.5	A	126.9	A	0.94	A
4 to 9	29 482	A	112.6	A	138.3	A	1.23	A
10 and more	1 881	B	69.4	C	92.2	B	1.33	A
Canada	**482 266**	**A**	**765.9**	**A**	**842.2**	**A**	**1.10**	**A**

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

Table 1.6 – Building characteristics and energy use by building size

Building size	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
5000 square feet or less (465 m^2 or less)	236 539	A	57.3	A	93.8	A	1.64	A
5001 to 10 000 square feet (466 to 929 m^2)	91 680	A	61.6	A	72.7	A	1.18	A
10 001 to 50 000 square feet (930 to 4645 m^2)	123 565	A	252.4	A	259.3	A	1.03	A
50 001 to 200 000 square feet (4646 to 18 580 m^2)	25 319	A	208.3	A	226.1	A	1.09	A
Over 200 000 square feet (Over 18 580 m^2)	5 162	A	186.4	A	190.4	A	1.02	A
Canada	**482 266**	**A**	**765.9**	**A**	**842.2**	**A**	**1.10**	**A**

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

Table 1.7 – Building characteristics and energy use by year of construction

Building size	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
Before 1920	46 951	A	54.0	A	50.5	A	0.93	A
1920 to 1959	83 521	A	91.1	A	98.9	A	1.09	A
1960 to 1969	67 758	A	126.1	A	120.6	A	0.96	A
1970 to 1979	75 107	A	158.6	A	183.1	A	1.15	A
1980 to 1989	91 404	A	116.2	A	131.9	A	1.14	A
1990 to 1999	58 106	A	105.3	A	120.1	A	1.14	A
2000 or later	59 418	A	114.6	A	137.1	A	1.20	A
2000 to 2004	29 316	A	55.3	A	74.0	B	1.34	A
2005 or later	30 102	A	59.4	B	63.1	A	1.06	A
Canada	**482 266**	**A**	**765.9**	**A**	**842.2**	**A**	**1.10**	**A**

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

Table 1.8 – Building characteristics and energy use by hours of operation*

Hours of operation	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
36 or less	48 333	A	31.8	A	26.8	A	0.84	A
37 to 48	132 389	A	148.2	A	128.4	A	0.87	A
49 to 72	149 721	A	234.0	A	207.0	A	0.88	A
73 to 96	47 380	A	109.0	A	129.2	A	1.18	A
97 to 120	38 492	A	62.5	A	104.5	A	1.67	A
121 to 168	65 951	A	180.4	A	246.3	A	1.37	A
Canada	**482 266**	**A**	**765.9**	**A**	**842.2**	**A**	**1.10**	**A**

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Total number of operating hours in a typical week.

Table 1.9 – Canadian commercial buildings by type of renovation

Type of renovation	Buildings	Q.I.	Share of total buildings	Floor space (millions of m^2)	Q.I.	Share of total floor space
No renovation	262 355	A	54.4%	328.7	A	42.9%
Any type of renovation	219 910	A	45.6%	437.2	A	57.1%
Space heating	84 385	A	17.5%	211.2	A	27.6%
Space cooling	61 219	A	12.7%	156.3	A	20.4%
Lighting	125 518	A	26.0%	282.6	A	36.9%
Windows/insulation	82 900	A	17.2%	167.0	A	21.8%
Additions/reductions	22 226	A	4.6%	58.5	A	7.6%
Other*	81 576	A	16.9%	164.5	A	21.5%
Any two energy-related renovations**	46 372	A	9.6%	109.4	A	14.3%
Any three energy-related renovations**	30 409	A	6.3%	72.9	A	9.5%
Any four energy-related renovations**	13 586	B	2.8%	35.2	B	4.6%
Any five energy-related renovations**	9 096	B	1.9%	24.5	C	3.2%
Canada	**482 266**	**A**		**765.9**	**A**	

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Other includes all other renovations not listed.

** Energy-related renovations are space heating and cooling, lighting, windows and insulation.

Note that a building can have more than one type of renovation. Therefore the sum of the renovated buildings will not add up to the total number of buildings in Canada. Overall, there were 219 910 buildings had at least one renovation, while 262 355 did not have any renovations. The renovations/retrofits noted above were undertaken during the years 2005 to 2009 (in the last five years).

Table 1.10 – Canadian commercial buildings by energy efficiency feature

Energy efficiency feature	Buildings	Q.I.	Share of total buildings	Floor space (millions of m^2)	Q.I.	Share of total floor space
No energy efficiency feature	266 278	A	55.2%	246.7	A	32.2%
Any energy efficiency feature	215 987	A	44.8%	519.2	A	67.8%
Energy conservation awareness program	110 590	A	22.9%	340.7	A	44.5%
Energy management control system for heating, ventilating and cooling (HVAC)	157 410	A	32.6%	427.8	A	55.9%
Energy management control system for lighting	79 533	A	16.5%	265.7	A	34.7%
Any two energy efficiency features	72 587	A	15.1%	176.7	A	23.1%
All three energy efficiency features	29 479	A	6.1%	169.2	A	22.1%
Canada	**482 266**	**A**		**765.9**	**A**	

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

Note that a building can have more than one type of energy efficiency feature. Therefore, the sum of the buildings will not add up to the total number of buildings in Canada.

Table 1.11 – Building characteristics by energy source used

Energy source	Buildings	Q.I.	Share of total buildings	Floor space (millions of m^2)	Q.I.	Share of total floor space
Electricity	471 117	A	97.7%	755.6	A	98.7%
Natural gas	305 665	A	63.4%	581.6	A	75.9%
Distillates*	62 846	A	13.0%	139.4	A	18.2%
Propane	27 508	A	5.7%	48.6	B	6.3%
Other fuel**	23 519	A	4.9%	77.6	A	10.1%
Canada	**482 266**	**A**		**765.9**	**A**	
Used only electricity and natural gas	281 496	A	58.4%	457.4	A	59.7%
Used only electricity and distillates*	47 241	A	9.8%	42.0	A	5.5%
Used only electricity and propane	19 211	B	4.0%	15.7	B	2.1%
Used only electricity and other fuel**	6 434	A	1.3%	26.2	B	3.4%
Used only natural gas and distillates*	X	X	X	X	X	X
Used only natural gas and propane	X	X	X	X	X	X
Used only natural gas and other fuel**	X	X	X	X	X	X
Used only electricity, natural gas and distillates*	8 448	B	1.8%	63.1	C	8.2%
Used only electricity, natural gas and propane	9 548	B	2.0%	40.5	B	5.3%
Used only electricity, natural gas and other fuel**	X	X	X	X	X	X

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Distillates include light fuel oil, diesel and kerosene.

** Other fuel includes all other fuels not listed.

Note that energy sources are not mutually exclusive (e.g. a building using electricity can also use natural gas). Therefore, the table should be read as follows: 63.4% of commercial buildings used natural gas in 2009.

Table 1.12 – Building characteristics by main energy source for space heating

Energy source	Buildings	Q.I.	Share of total buildings	Floor space (millions of m^2)	Q.I.	Share of total floor space
No space heating	19 964	C	4.1%	10.3	C	1.3%
Electricity	131 659	A	27.3%	185.2	A	24.2%
Natural gas	260 550	A	54.0%	460.4	A	60.1%
Distillates*	49 903	A	10.3%	52.5	A	6.9%
Propane	–	F	–	–	F	–
Other fuel**	9 562	B	2.0%	50.1	A	6.5%
Canada	**482 266**	**A**	**100.0%**	**765.9**	**A**	**100.0%**

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Distillates include light fuel oil, diesel and kerosene.

** Other fuel includes all other fuels not listed.

Table 1.13 – Building characteristics by main energy source for space cooling

Energy source	Buildings	Q.I.	Share of total buildings	Floor space (millions of m^2)	Q.I.	Share of total floor space
No space cooling	150 583	A	31.2%	130.2	A	17.0%
Electricity	290 565	A	60.3%	556.0	A	72.6%
Natural gas	35 089	A	7.3%	54.4	A	7.1%
Distillates*	–	F	–	–	F	–
Propane	–	F	–	–	F	–
Other fuel**	4 058	C	0.8%	24.0	B	3.1%
Canada	**482 266**	**A**	**100.0%**	**765.9**	**A**	**100.0%**

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Distillates include light fuel oil, diesel and kerosene.

** Other fuel includes all other fuels not listed.

Table 1.14 – Building characteristics by main energy source for water heating

Energy source	Buildings	Q.I.	Share of total buildings	Floor space (millions of m^2)	Q.I.	Share of total floor space
No water heating	53 525	A	11.1%	33.7	A	4.4%
Electricity	222 932	A	46.2%	272.0	A	35.5%
Natural gas	180 938	A	37.5%	388.5	A	50.7%
Distillates*	17 215	A	3.6%	30.3	C	4.0%
Propane	–	F	–	–	F	–
Other fuel**	4 322	A	0.9%	36.9	B	4.8%
Canada	**482 266**	**A**	**100.0%**	**765.9**	**A**	**100.0%**

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Distillates include light fuel oil, diesel and kerosene.

** Other fuel includes all other fuels not listed.

Table 1.15 – Building characteristics and energy use by primary activity and size

Primary activity	Building size	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
Office building (non-medical)	**Total**	**83 583**	**A**	**147.5**	**A**	**176.6**	**A**	**1.20**	**A**
	5000 square feet or less (465 m^2 or less)	47 815	A	12.4	A	13.5	B	1.08	A
	5001 to 10 000 square feet (466 to 929 m^2)	12 481	B	8.2	B	7.7	B	0.93	A
	10 001 to 50 000 square feet (930 to 4645 m^2)	17 479	A	34.2	A	39.4	A	1.15	A
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	4 838	B	39.6	B	53.9	B	1.36	A
	Over 200 000 square feet (Over 18 580 m^2)	970	C	–	F	62.1	C	1.17	A
Medical office building	**Total**	**10 525**	**A**	**9.6**	**A**	**10.5**	**A**	**1.09**	**A**
	5000 square feet or less (465 m^2 or less)	5 086	B	0.9	B	0.9	B	0.98	A
	5001 to 10 000 square feet (466 to 929 m^2)	2 876	C	1.9	C	–	F	0.93	B
	10 001 to 50 000 square feet (930 to 4645 m^2)	2 213	B	3.3	B	3.3	B	1.00	A
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	335	B	2.9	B	3.4	B	1.16	A
	Over 200 000 square feet (Over 18 580 m^2)	–	F	0.6	C	–	F	1.83	A
Elementary or secondary school	**Total**	**18 425**	**A**	**83.6**	**A**	**64.4**	**A**	**0.77**	**A**
	5000 square feet or less (465 m^2 or less)	1 108	C	–	F	–	F	1.43	C
	5001 to 10 000 square feet (466 to 929 m^2)	954	C	0.7	C	–	F	–	F
	10 001 to 50 000 square feet (930 to 4645 m^2)	11 601	A	29.9	A	22.4	A	0.75	A
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	4 005	A	33.2	A	29.4	A	0.89	A
	Over 200 000 square feet (Over 18 580 m^2)	757	C	19.5	C	10.3	C	0.53	A

(Continued)

Table 1.15 – Building characteristics and energy use by primary activity and size (continued)

Primary activity	Building size	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
Nursing or residential care facility	**Total**	**6 482**	**A**	**25.0**	**B**	**39.1**	**B**	**1.56**	**A**
	5000 square feet or less (465 m^2 or less)	2 966	A	0.8	B	1.1	C	1.40	A
	5001 to 10 000 square feet (466 to 929 m^2)	361	C	0.2	C	0.2	C	0.87	A
	10 001 to 50,000 square feet (930 to 4645 m^2)	1 540	B	4.3	B	9.0	C	2.08	A
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	1 377	B	11.4	B	17.5	B	1.54	A
	Over 200 000 square feet (Over 18 580 m^2)	–	F	–	F	–	F	1.37	A
Warehouse	**Total**	**32 879**	**A**	**83.0**	**A**	**55.0**	**A**	**0.66**	**A**
	5000 square feet or less (465 m^2 or less)	13 678	B	3.3	C	–	F	1.16	C
	5001 to 10 000 square feet (466 to 929 m^2)	4 548	C	3.1	C	2.4	C	0.79	B
	10 001 to 50 000 square feet (930 to 4645 m^2)	10 848	B	22.2	B	15.9	B	0.72	A
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	2 578	B	21.6	B	12.3	B	0.57	A
	Over 200 000 square feet (Over 18 580 m^2)	1 227	C	32.8	C	20.5	C	0.63	B
Hotel or motel	**Total**	**9 963**	**C**	**19.7**	**B**	**26.5**	**C**	**1.35**	**A**
	5000 square feet or less (465 m^2 or less)	–	F	0.8	C	–	F	–	F
	5001 to 10 000 square feet (466 to 929 m^2)	1 232	C	0.8	C	–	F	–	F
	10 001 to 50 000 square feet (930 to 4645 m^2)	2 585	A	5.6	B	6.4	B	1.14	A
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	757	C	6.4	C	8.8	B	1.39	A
	Over 200 000 square feet (Over 18 580 m^2)	–	F	–	F	–	F	1.42	C

(Continued)

Table 1.15 – Building characteristics and energy use by primary activity and size (continued)

Primary activity	Building size	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
Hospital	**Total**	**752**	**A**	**15.1**	**A**	**36.5**	**A**	**2.42**	**A**
	5000 square feet or less (465 m^2 or less)	X	X	X	X	X	X	X	X
	5001 to 10 000 square feet (466 to 929 m^2)	X	X	X	X	X	X	X	X
	10 001 to 50,000 square feet (930 to 4645 m^2)	180	A	0.5	A	1.3	B	2.60	A
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	329	A	3.6	A	8.4	B	2.37	A
	Over 200 000 square feet (Over 18 580 m^2)	233	A	11.0	A	26.8	A	2.43	A
Food or beverage store	**Total**	**40 403**	**A**	**29.3**	**A**	**82.7**	**A**	**2.82**	**A**
	5000 square feet or less (465 m^2 or less)	25 527	A	5.8	A	26.0	B	4.46	A
	5001 to 10 000 square feet (466 to 929 m^2)	9 290	B	5.8	B	16.7	C	2.89	A
	10 001 to 50 000 square feet (930 to 4645 m^2)	4 673	B	11.5	B	25.4	B	2.20	A
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	X	X	X	X	X	X	X	X
	Over 200 000 square feet (Over 18 580 m^2)	X	X	X	X	X	X	X	X
Non-food retail store	**Total**	**56 750**	**A**	**68.9**	**A**	**65.2**	**A**	**0.95**	**A**
	5000 square feet or less (465 m^2 or less)	24 678	A	5.3	B	9.0	C	1.70	B
	5001 to 10 000 square feet (466 to 929 m^2)	13 290	C	9.6	B	8.6	C	0.90	B
	10 001 to 50 000 square feet (930 to 4645 m^2)	17 121	B	33.0	B	31.5	C	0.95	A
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	1 430	C	12.4	B	8.7	B	0.70	A
	Over 200 000 square feet (Over 18 580 m^2)	231	C	8.6	B	7.4	C	0.87	A

(Continued)

Table 1.15 – Building characteristics and energy use by primary activity and size (continued)

Primary activity	Building size	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
Other*	Total	222 505	A	284.3	A	285.8	A	1.01	A
	5000 square feet or less (465 m^2 or less)	110 447	A	27.6	A	38.4	A	1.39	A
	5001 to 10 000 square feet (466 to 929 m^2)	46 647	A	31.4	A	31.6	A	1.01	A
	10 001 to 50 000 square feet (930 to 4645 m^2)	55 325	A	107.8	A	104.8	A	0.97	A
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	8 758	A	71.1	A	68.9	A	0.97	A
	Over 200 000 square feet (Over 18 580 m^2)	1 329	C	46.4	B	42.0	C	0.91	A
All building types	Total	482 266	A	765.9	A	842.2	A	1.10	A
	5000 square feet or less (465 m^2 or less)	236 539	A	57.3	A	93.8	A	1.64	A
	5001 to 10 000 square feet (466 to 929 m^2)	91 680	A	61.6	A	72.7	A	1.18	A
	10 001 to 50 000 square feet (930 to 4645 m^2)	123 565	A	252.4	A	259.3	A	1.03	A
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	25 319	A	208.3	A	226.1	A	1.09	A
	Over 200 000 square feet (Over 18 580 m^2)	5 162	A	186.4	A	190.4	A	1.02	A

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Other includes all other commercial buildings. See Appendix C for more details.

Table 1.16 – Building characteristics and energy use by primary activity and year of construction

Primary activity	Year of construction	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
Office building (non-medical)	**Total**	**83 583**	**A**	**147.5**	**A**	**176.6**	**A**	**1.20**	**A**
	Before 1920	11 963	C	10.8	B	11.7	B	1.08	A
	1920 to 1959	13 221	B	14.9	B	15.4	B	1.03	A
	1960 to 1969	8 777	C	9.0	B	14.3	C	1.60	A
	1970 to 1979	16 397	B	56.5	C	61.2	C	1.08	A
	1980 to 1989	12 904	B	28.8	A	36.1	A	1.25	A
	1990 to 1999	5 360	B	–	F	–	F	1.22	B
	2000 or later	14 961	B	–	F	–	F	–	F
	2000 to 2004	6 570	C	6.1	C	–	F	–	F
	2005 or later	–	F	–	F	–	F	0.85	B
Medical office building	**Total**	**10 525**	**A**	**9.6**	**A**	**10.5**	**A**	**1.09**	**A**
	Before 1920	X	X	X	X	X	X	X	X
	1920 to 1959	X	X	X	X	X	X	X	X
	1960 to 1969	–	F	1.9	C	–	F	1.21	A
	1970 to 1979	2 142	C	1.9	C	1.7	C	0.89	A
	1980 to 1989	1 899	C	1.8	B	2.0	C	1.13	A
	1990 to 1999	1 473	C	1.3	C	–	F	1.17	A
	2000 or later	–	F	0.9	C	0.7	C	0.82	A
	2000 to 2004	–	F	–	F	–	F	0.87	B
	2005 or later	–	F	–	F	–	F	0.77	B

(Continued)

Table 1.16 – Building characteristics and energy use by primary activity and year of construction (continued)

Primary activity	Year of construction	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
Elementary or secondary school	**Total**	**18 425**	**A**	**83.6**	**A**	**64.4**	**A**	**0.77**	**A**
	Before 1920	–	F	–	F	–	F	0.95	A
	1920 to 1959	2 992	A	11.1	A	9.1	B	0.82	A
	1960 to 1969	6 061	B	27.0	B	19.6	A	0.73	A
	1970 to 1979	2 517	B	16.1	B	12.6	B	0.79	B
	1980 to 1989	1 372	B	5.0	B	3.6	C	0.71	A
	1990 to 1999	2 451	B	11.2	B	8.4	B	0.75	A
	2000 or later	1 935	C	8.3	B	6.5	B	0.78	A
	2000 to 2004	–	F	4.9	C	3.2	C	0.67	A
	2005 or later	–	F	–	F	–	F	0.94	A
Nursing or residential care facility	**Total**	**6 482**	**A**	**25.0**	**B**	**39.1**	**B**	**1.56**	**A**
	Before 1920	–	F	–	F	1.9	C	0.74	B
	1920 to 1959	426	C	1.4	C	2.1	C	1.47	A
	1960 to 1969	1 502	B	3.6	C	–	F	1.91	B
	1970 to 1979	1 210	B	3.2	B	5.4	B	1.70	A
	1980 to 1989	777	B	2.0	B	2.5	B	1.27	A
	1990 to 1999	1 169	B	–	F	–	F	1.49	A
	2000 or later	934	C	3.6	C	7.4	C	2.05	A
	2000 to 2004	–	F	–	F	–	F	2.23	A
	2005 or later	–	F	–	F	–	F	1.68	A

(Continued)

Table 1.16 – Building characteristics and energy use by primary activity and year of construction (continued)

Primary activity	Year of construction	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
Warehouse	**Total**	**32 879**	**A**	**83.0**	**A**	**55.0**	**A**	**0.66**	**A**
	Before 1920	X	X	X	X	X	X	X	X
	1920 to 1959	X	X	X	X	X	X	X	X
	1960 to 1969	–	F	–	F	5.8	C	0.54	B
	1970 to 1979	6 500	B	14.7	C	9.4	B	0.64	B
	1980 to 1989	7 428	C	8.7	B	9.5	C	1.09	A
	1990 to 1999	–	F	12.4	B	12.4	C	1.00	B
	2000 or later	6 672	C	26.9	C	12.9	C	0.48	A
	2000 to 2004	–	F	–	F	5.0	C	0.45	B
	2005 or later	2 381	C	–	F	–	F	0.50	B
Hotel or motel	**Total**	**9 963**	**C**	**19.7**	**B**	**26.5**	**C**	**1.35**	**A**
	Before 1920	–	F	0.7	C	–	F	–	F
	1920 to 1959	2 698	B	–	F	–	F	1.47	A
	1960 to 1969	–	F	1.7	B	1.8	B	1.05	A
	1970 to 1979	1 075	B	4.2	B	6.3	B	1.50	A
	1980 to 1989	–	F	3.3	B	–	F	1.12	C
	1990 to 1999	–	F	–	F	–	F	1.33	C
	2000 or later	–	F	–	F	–	F	1.21	B
	2000 to 2004	–	F	–	F	–	F	–	F
	2005 or later	–	F	–	F	–	F	1.08	A

(Continued)

Table 1.16 – Building characteristics and energy use by primary activity and year of construction (continued)

Primary activity	Year of construction	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
Hospital	**Total**	**752**	**A**	**15.1**	**A**	**36.5**	**A**	**2.42**	**A**
	Before 1920	17	C	1.1	C	1.4	B	1.30	B
	1920 to 1959	106	A	2.3	A	4.8	A	2.04	A
	1960 to 1969	224	B	3.4	A	7.3	B	2.17	A
	1970 to 1979	156	B	4.0	B	12.5	C	3.14	A
	1980 to 1989	94	B	1.5	B	3.4	B	2.29	A
	1990 to 1999	60	B	0.8	C	2.4	C	2.88	A
	2000 or later	94	B	2.0	B	4.7	B	2.38	A
	2000 to 2004	57	C	–	F	–	F	2.51	A
	2005 or later	37	C	1.3	C	3.1	C	2.31	A
Food or beverage store	**Total**	**40 403**	**A**	**29.3**	**A**	**82.7**	**A**	**2.82**	**A**
	Before 1920	–	F	–	F	–	F	0.70	B
	1920 to 1959	9 142	A	5.2	B	–	F	2.42	B
	1960 to 1969	6 887	C	3.6	C	7.3	C	2.04	B
	1970 to 1979	5 619	C	3.4	C	10.1	C	2.95	B
	1980 to 1989	6 333	B	–	F	13.8	C	2.43	B
	1990 to 1999	4 971	C	4.2	C	13.5	B	3.20	A
	2000 or later	6 914	B	7.0	C	25.4	C	3.63	A
	2000 to 2004	2 968	B	–	F	–	F	2.97	A
	2005 or later	–	F	2.1	C	–	F	5.18	A

(Continued)

Table 1.16 – Building characteristics and energy use by primary activity and year of construction (continued)

Primary activity	Year of construction	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
Non-food retail store	**Total**	**56 750**	**A**	**68.9**	**A**	**65.2**	**A**	**0.95**	**A**
	Before 1920	–	F	–	F	–	F	0.52	A
	1920 to 1959	9 548	B	6.8	C	6.4	C	0.94	A
	1960 to 1969	6 491	C	4.0	C	5.8	C	1.47	B
	1970 to 1979	8 742	C	12.9	B	12.7	C	0.98	B
	1980 to 1989	10 035	C	9.3	B	7.6	C	0.81	A
	1990 to 1999	–	F	11.2	C	9.4	C	0.84	B
	2000 or later	10 240	C	15.9	C	–	F	1.18	B
	2000 to 2004	–	F	–	F	–	F	1.48	A
	2005 or later	–	F	–	F	–	F	1.01	C
Other*	**Total**	**222 505**	**A**	**284.3**	**A**	**285.8**	**A**	**1.01**	**A**
	Before 1920	25 954	B	24.5	B	23.6	B	0.96	A
	1920 to 1959	40 839	A	36.1	B	39.2	C	1.08	B
	1960 to 1969	28 487	A	61.3	B	49.5	B	0.81	A
	1970 to 1979	30 749	A	41.8	A	51.2	A	1.22	A
	1980 to 1989	49 249	A	50.0	A	49.6	B	0.99	A
	1990 to 1999	31 134	B	35.4	B	34.4	C	0.97	A
	2000 or later	16 094	A	35.2	A	38.3	A	1.09	A
	2000 to 2004	8 947	B	18.5	B	20.1	B	1.09	A
	2005 or later	7 147	A	16.7	B	18.2	B	1.09	A

(Continued)

Table 1.16 – Building characteristics and energy use by primary activity and year of construction (continued)

Primary activity	Year of construction	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
All building types	Total	482 266	A	765.9	A	842.2	A	1.10	A
	Before 1920	46 951	A	54.0	A	50.5	A	0.93	A
	1920 to 1959	83 521	A	91.1	A	98.9	A	1.09	A
	1960 to 1969	67 758	A	126.1	A	120.6	A	0.96	A
	1970 to 1979	75 107	A	158.6	A	183.1	A	1.15	A
	1980 to 1989	91 404	A	116.2	A	131.9	A	1.14	A
	1990 to 1999	58 106	A	105.3	A	120.1	A	1.14	A
	2000 or later	59 418	A	114.6	A	137.1	A	1.20	A
	2000 to 2004	29 316	A	55.3	A	74.0	B	1.34	A
	2005 or later	30 102	A	59.4	B	63.1	A	1.06	A

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Other includes all other commercial buildings. See Appendix C for more details.

Table 1.17 – Building characteristics and energy use by primary activity and number of floors

Primary activity	Floors	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
Office building (non-medical)	**Total**	**83 583**	**A**	**147.5**	**A**	**176.6**	**A**	**1.20**	**A**
	1	22 013	A	18.8	B	34.7	C	1.85	B
	2	33 615	A	23.7	A	23.1	A	0.98	A
	3	20 113	B	24.7	B	23.4	B	0.95	A
	4 to 9	6 638	B	28.6	B	30.5	B	1.07	A
	10 and more	1 204	B	–	F	64.9	C	1.26	A
Medical office building	**Total**	**10 525**	**A**	**9.6**	**A**	**10.5**	**A**	**1.09**	**A**
	1	3 959	B	2.2	C	2.5	C	1.15	A
	2	4 548	B	3.2	B	3.0	B	0.94	A
	3	–	F	0.9	B	0.7	B	0.83	A
	4 to 9	–	F	2.4	C	3.2	B	1.33	A
	10 and more	–	F	–	F	–	F	1.07	A
Elementary or secondary school	**Total**	**18 425**	**A**	**83.6**	**A**	**64.4**	**A**	**0.77**	**A**
	1	9 231	A	28.9	A	19.7	A	0.68	A
	2	5 454	A	27.4	A	23.1	A	0.84	A
	3	3 456	A	24.7	B	19.7	B	0.80	A
	4 to 9	X	X	X	X	X	X	X	X
	10 and more	X	X	X	X	X	X	X	X

(Continued)

Table 1.17 – Building characteristics and energy use by primary activity and number of floors (continued)

Primary activity	Floors	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
Nursing or residential care facility	**Total**	**6 482**	**A**	**25.0**	**B**	**39.1**	**B**	**1.56**	**A**
	1	1 676	B	3.7	C	6.9	C	1.87	A
	2	X	X	X	X	X	X	X	X
	3	1 369	B	4.6	C	–	F	1.34	B
	4 to 9	745	A	7.0	A	10.8	A	1.55	A
	10 and more	X	X	X	X	X	X	X	X
Warehouse	**Total**	**32 879**	**A**	**83.0**	**A**	**55.0**	**A**	**0.66**	**A**
	1	23 396	B	38.7	A	25.2	A	0.65	A
	2	8 708	B	38.9	B	23.8	B	0.61	A
	3	–	F	–	F	–	F	–	F
	4 to 9	X	X	X	X	X	X	X	X
	10 and more	X	X	X	X	X	X	X	X
Hotel or motel	**Total**	**9 963**	**C**	**19.7**	**B**	**26.5**	**C**	**1.35**	**A**
	1	–	F	0.9	C	–	F	0.66	B
	2	2 808	C	3.8	C	–	F	1.07	B
	3	1 533	C	–	F	–	F	1.40	B
	4 to 9	1 491	C	6.2	B	8.6	B	1.40	A
	10 and more	–	F	–	F	–	F	1.55	B

(Continued)

Table 1.17 – Building characteristics and energy use by primary activity and number of floors (continued)

Primary activity	Floors	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
Hospital	**Total**	**752**	**A**	**15.1**	**A**	**36.5**	**A**	**2.42**	**A**
	1	92	B	0.6	C	–	F	2.99	A
	2	176	B	1.1	C	–	F	2.27	B
	3	72	B	0.7	B	1.6	B	2.29	A
	4 to 9	349	A	9.4	A	21.8	A	2.32	A
	10 and more	63	B	3.3	B	8.8	C	2.70	A
Food or beverage store	**Total**	**40 403**	**A**	**29.3**	**A**	**82.7**	**A**	**2.82**	**A**
	1	23 874	A	16.9	B	58.0	A	3.44	A
	2	10 360	A	7.6	A	17.6	B	2.31	A
	3	5 501	C	4.1	C	5.2	C	1.25	A
	4 to 9	X	X	X	X	X	X	X	X
	10 and more	X	X	X	X	X	X	X	X
Non-food retail store	**Total**	**56 750**	**A**	**68.9**	**A**	**65.2**	**A**	**0.95**	**A**
	1	30 277	A	37.5	B	45.2	B	1.21	A
	2	14 300	B	13.4	B	9.6	B	0.72	A
	3	8 584	C	12.7	C	7.9	C	0.63	A
	4 to 9	X	X	X	X	X	X	X	X
	10 and more	X	X	X	X	X	X	X	X

(Continued)

Table 1.17 – Building characteristics and energy use by primary activity and number of floors (continued)

Primary activity	Floors	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
Other*	Total	222 505	A	284.3	A	285.8	A	1.01	A
	1	111 037	A	79.8	A	75.1	A	0.94	A
	2	65 009	A	92.1	A	93.9	A	1.02	A
	3	31 513	A	48.6	B	56.4	C	0.99	B
	4 to 9	14 645	B	56.7	A	52.8	A	1.09	A
	10 and more	–	F	–	F	7.6	C	1.07	A
All building types	Total	482 266	A	765.9	A	842.2	A	1.10	A
	1	229 475	A	227.9	A	269.7	A	1.18	A
	2	147 645	A	220.6	A	215.2	A	0.98	A
	3	73 782	A	135.5	A	126.9	A	0.94	A
	4 to 9	29 482	A	112.6	A	138.3	A	1.23	A
	10 and more	1 881	B	69.4	C	92.2	B	1.33	A

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Other includes all other commercial buildings. See Appendix C for more details.

Table 1.18 – Building characteristics and energy use by primary activity and number of hours of operation

Primary activity	Hours of operation	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
Office building (non-medical)	**Total**	**83 583**	**A**	**147.5**	**A**	**176.6**	**A**	**1.20**	**A**
	36 or less	5 260	C	2.7	C	–	F	1.51	C
	37 to 48	40 672	A	40.5	B	42.6	B	1.05	A
	49 to 72	27 170	B	67.6	C	75.4	B	1.12	A
	73 to 96	–	F	11.4	C	14.6	C	1.28	A
	97 to 120	2 189	C	–	F	–	F	–	F
	121 to 168	3 288	B	17.5	C	24.2	C	1.38	A
Medical office building	**Total**	**10 525**	**A**	**9.6**	**A**	**10.5**	**A**	**1.09**	**A**
	36 or less	X	X	X	X	X	X	X	X
	37 to 48	3 161	C	1.8	B	1.6	B	0.85	A
	49 to 72	4 077	B	3.9	B	3.8	B	0.99	A
	73 to 96	–	F	2.4	C	2.6	C	1.13	A
	97 to 120	X	X	X	X	X	X	X	X
	121 to 168	91	C	0.7	C	1.3	C	1.89	A
Elementary or secondary school	**Total**	**18 425**	**A**	**83.6**	**A**	**64.4**	**A**	**0.77**	**A**
	36 or less	1 496	B	7.7	C	6.3	C	0.82	A
	37 to 48	7 001	A	27.7	A	21.1	A	0.76	A
	49 to 72	7 287	A	29.9	B	23.0	B	0.77	A
	73 to 96	2 296	B	13.5	A	9.9	A	0.73	A
	97 to 120	–	F	1.9	C	1.5	C	0.79	A
	121 to 168	–	F	–	F	–	F	0.89	A

(Continued)

Table 1.18 – Building characteristics and energy use by primary activity and number of hours of operation (continued)

Primary activity	Hours of operation	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
Nursing or residential care facility	**Total**	**6 482**	**A**	**25.0**	**B**	**39.1**	**B**	**1.56**	**A**
	36 or less	X	X	X	X	X	X	X	X
	37 to 48	X	X	X	X	X	X	X	X
	49 to 72	X	X	X	X	X	X	X	X
	73 to 96	X	X	X	X	X	X	X	X
	97 to 120	X	X	X	X	X	X	X	X
	121 to 168	6 354	A	24.7	B	38.7	B	1.57	A
Warehouse	**Total**	**32 879**	**A**	**83.0**	**A**	**55.0**	**A**	**0.66**	**A**
	36 or less	–	F	–	F	–	F	0.73	C
	37 to 48	14 005	B	14.9	A	12.2	B	0.82	A
	49 to 72	11 168	B	–	B	15.8	B	0.48	A
	73 to 96	1 020	B	–	F	–	F	0.67	A
	97 to 120	–	F	–	F	–	F	0.63	C
	121 to 168	1 561	B	16.8	C	14.9	C	0.89	B
Hotel or motel	**Total**	**9 963**	**C**	**19.7**	**B**	**26.5**	**C**	**1.35**	**A**
	36 or less	X	X	X	X	X	X	X	X
	37 to 48	X	X	X	X	X	X	X	X
	49 to 72	X	X	X	X	X	X	X	X
	73 to 96	X	X	X	X	X	X	X	X
	97 to 120	–	F	–	F	–	F	1.11	B
	121 to 168	7 616	C	18.6	B	25.2	C	1.35	A

(Continued)

Table 1.18 – Building characteristics and energy use by primary activity and number of hours of operation (continued)

Primary activity	Hours of operation	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
Hospital	**Total**	**752**	**A**	**15.1**	**A**	**36.5**	**A**	**2.42**	**A**
	36 or less	X	X	X	X	X	X	X	X
	37 to 48	–	F	–	F	–	F	1.69	A
	49 to 72	X	X	X	X	X	X	X	X
	73 to 96	X	X	X	X	X	X	X	X
	97 to 120	X	X	X	X	X	X	X	X
	121 to 168	723	A	14.9	A	36.3	A	2.43	A
Food or beverage store	**Total**	**40 403**	**A**	**29.3**	**A**	**82.7**	**A**	**2.82**	**A**
	36 or less	X	X	X	X	X	X	X	X
	37 to 48	X	X	X	X	X	X	X	X
	49 to 72	8 937	B	2.6	B	6.1	B	2.35	A
	73 to 96	10 748	A	7.6	B	26.1	B	3.41	A
	97 to 120	12 930	B	9.7	B	28.3	B	2.91	A
	121 to 168	6 404	B	8.7	C	21.4	C	2.47	A
Non-food retail store	**Total**	**56 750**	**A**	**68.9**	**A**	**65.2**	**A**	**0.95**	**A**
	36 or less	–	F	–	F	–	F	0.40	A
	37 to 48	14 172	A	9.7	A	6.2	A	0.64	A
	49 to 72	25 328	A	28.6	A	27.9	B	0.98	A
	73 to 96	–	F	18.2	C	–	F	0.87	B
	97 to 120	–	F	8.0	C	11.0	C	1.37	B
	121 to 168	–	F	–	F	–	F	1.40	A

(Continued)

Table 1.18 – Building characteristics and energy use by primary activity and number of hours of operation (continued)

Primary activity	Hours of operation	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
Other*	Total	222 505	A	284.3	A	285.8	A	1.01	A
	36 or less	32 662	A	16.8	A	13.0	A	0.78	A
	37 to 48	51 983	A	52.8	B	43.9	B	0.83	A
	49 to 72	65 085	A	68.3	A	54.7	A	0.80	A
	73 to 96	18 324	B	45.4	A	52.8	A	1.16	A
	97 to 120	15 294	A	28.0	B	43.2	B	1.54	A
	121 to 168	39 157	A	73.0	A	78.1	B	1.07	A
All building types	Total	482 266	A	765.9	A	842.2	A	1.10	A
	36 or less	48 333	A	31.8	A	26.8	A	0.84	A
	37 to 48	132 389	A	148.2	A	128.4	A	0.87	A
	49 to 72	149 721	A	234.0	A	207.0	A	0.88	A
	73 to 96	47 380	A	109.0	A	129.2	A	1.18	A
	97 to 120	38 492	A	62.5	A	104.5	A	1.67	A
	121 to 168	65 951	A	180.4	A	246.3	A	1.37	A

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Other includes all other commercial buildings. See Appendix C for more details.

Table 1.19 – Building characteristics by primary activity and type of renovation

Primary activity	Type of renovation	Buildings	Q.I.	Share of total buildings	Floor space (millions of m²)	Q.I.	Share of total floor space
Office building (non-medical)	**Total**	**83 583**	**A**		**147.5**	**A**	
	No renovation	47 762	A	57.1%	57.5	A	39.0%
	Any type of renovation	35 820	A	42.9%	90.0	B	61.0%
	Space heating	16 160	B	19.3%	59.1	C	40.1%
	Space cooling	14 201	B	17.0%	38.6	A	26.2%
	Lighting	23 129	B	27.7%	48.7	A	33.0%
	Windows/insulation	17 308	B	20.7%	24.2	B	16.4%
	Additions/reductions	–	F	–	–	F	–
	Other**	18 256	B	21.8%	30.3	B	20.6%
Medical office building	**Total**	**10 525**	**A**		**9.6**	**A**	
	No renovation	4 753	A	45.2%	3.7	A	38.6%
	Any type of renovation	5 772	B	54.8%	5.9	A	61.4%
	Space heating	1 637	C	15.6%	2.5	B	26.3%
	Space cooling	–	F	–	2.1	C	21.8%
	Lighting	–	F	–	3.4	B	35.2%
	Windows/insulation	–	F	–	–	F	–
	Additions/reductions	–	F	–	–	F	–
	Other**	–	F	–	2.4	B	41.3%

(Continued)

Table 1.19 – Building characteristics by primary activity and type of renovation (continued)

Primary activity	Type of renovation	Buildings	Q.I.	Share of total buildings	Floor space (millions of m^2)	Q.I.	Share of total floor space
Elementary or secondary school	**Total**	**18 425**	**A**		**83.6**	**A**	
	No renovation	5 903	A	32.0%	21.6	A	25.9%
	Any type of renovation	12 522	A	68.0%	62.0	A	74.1%
	Space heating	6 966	A	37.8%	33.5	A	40.1%
	Space cooling	1 882	B	10.2%	10.2	B	12.3%
	Lighting	7 043	A	38.2%	36.9	A	44.1%
	Windows/insulation	4 197	A	22.8%	22.2	B	26.6%
	Additions/reductions	1 301	C	7.1%	–	F	–
	Other**	4 547	B	24.7%	20.5	B	24.5%
Nursing or residential care facility	**Total**	**6 482**	**A**		**25.0**	**B**	
	No renovation	3 024	A	46.7%	14.7	C	58.8%
	Any type of renovation	3 457	A	53.3%	10.3	A	41.2%
	Space heating	814	B	12.6%	3.3	C	13.1%
	Space cooling	788	C	12.2%	3.4	C	13.5%
	Lighting	1 259	B	19.4%	6.0	B	23.9%
	Windows/insulation	1 539	B	23.7%	4.9	C	19.7%
	Additions/reductions	–	F	–	–	F	–
	Other**	979	B	15.1%	3.6	C	14.5%

(Continued)

Table 1.19 – Building characteristics by primary activity and type of renovation (continued)

Primary activity	Type of renovation	Buildings	Q.I.	Share of total buildings	Floor space (millions of m^2)	Q.I.	Share of total floor space
Warehouse	**Total**	**32 879**	**A**		**83.0**	**A**	
	No renovation	23 052	A	70.1%	43.5	B	52.4%
	Any type of renovation	9 828	B	29.9%	39.5	B	47.6%
	Space heating	4 948	C	15.1%	14.6	C	17.6%
	Space cooling	–	F	–	8.7	B	10.5%
	Lighting	3 999	B	12.2%	29.3	C	35.3%
	Windows/insulation	2 773	B	8.4%	–	F	–
	Additions/reductions	–	F	–	–	F	–
	Other**	2 980	C	9.1%	–	F	–
Hotel or motel	**Total**	**9 963**	**C**		**19.7**	**B**	
	No renovation	–	F	–	–	F	–
	Any type of renovation	6 287	B	63.1%	13.4	B	67.9%
	Space heating	–	F	–	7.8	C	39.7%
	Space cooling	2 744	B	27.5%	8.0	C	40.7%
	Lighting	5 010	B	50.3%	11.1	B	56.4%
	Windows/insulation	3 192	C	32.0%	3.3	A	16.9%
	Additions/reductions	–	F	–	–	F	–
	Other**	2 697	B	27.1%	–	F	–

(Continued)

Table 1.19 – Building characteristics by primary activity and type of renovation (continued)

Primary activity	Type of renovation	Buildings	Q.I.	Share of total buildings	Floor space (millions of m^2)	Q.I.	Share of total floor space
Hospital	**Total**	**752**	**A**		**15.1**	**A**	
	No renovation	234	A	31.1%	3.2	B	21.3%
	Any type of renovation	518	A	68.9%	11.9	A	78.7%
	Space heating	274	A	36.5%	6.6	A	44.0%
	Space cooling	279	A	37.2%	6.6	A	44.0%
	Lighting	329	A	43.8%	6.8	A	45.3%
	Windows/insulation	145	A	19.3%	3.4	A	22.4%
	Additions/reductions	88	A	11.8%	4.5	B	30.1%
	Other**	164	A	21.8%	4.3	A	28.5%
Food or beverage store	**Total**	**40 403**	**A**		**29.3**	**A**	
	No renovation	26 051	A	64.5%	18.6	B	63.5%
	Any type of renovation	14 352	A	35.5%	10.7	B	36.5%
	Space heating	3 391	B	8.4%	4.1	C	14.0%
	Space cooling	3 213	C	8.0%	–	F	–
	Lighting	8 746	B	21.6%	6.3	B	21.6%
	Windows/insulation	3 010	B	7.5%	1.8	C	6.1%
	Additions/reductions	–	F	–	–	F	–
	Other**	3 587	B	8.9%	–	F	–

(Continued)

Table 1.19 – Building characteristics by primary activity and type of renovation (continued)

Primary activity	Type of renovation	Buildings	Q.I.	Share of total buildings	Floor space (millions of m^2)	Q.I.	Share of total floor space
Non-food retail store	**Total**	**56 750**	**A**		**68.9**	**A**	
	No renovation	36 985	A	65.2%	41.0	A	59.5%
	Any type of renovation	19 764	B	34.8%	27.9	B	40.5%
	Space heating	10 747	C	18.9%	12.3	C	17.8%
	Space cooling	6 896	C	12.2%	13.8	C	20.1%
	Lighting	12 850	B	22.6%	22.0	B	31.9%
	Windows/insulation	9 656	C	17.0%	10.7	C	15.6%
	Additions/reductions	–	F	–	–	F	–
	Other**	7 142	C	12.6%	11.4	C	16.5%
Other*	**Total**	**222 505**	**A**		**284.3**	**A**	
	No renovation	110 916	A	49.8%	118.6	A	41.7%
	Any type of renovation	111 590	A	50.2%	165.7	A	58.3%
	Space heating	36 850	A	16.6%	67.3	A	23.7%
	Space cooling	27 413	A	12.3%	60.2	A	21.2%
	Lighting	60 699	A	27.3%	112.1	A	39.4%
	Windows/insulation	39 426	A	17.7%	79.0	A	27.8%
	Additions/reductions	11 317	C	5.1%	27.9	C	9.8%
	Other**	39 260	A	17.6%	66.1	A	23.2%

(Continued)

Table 1.19 – Building characteristics by primary activity and type of renovation (continued)

Primary activity	Type of renovation	Buildings	Q.I.	Share of total buildings	Floor space (millions of m^2)	Q.I.	Share of total floor space
All building types	Total	482 266	A		765.9	A	
	No renovation	262 355	A	54.4%	328.7	A	42.9%
	Any type of renovation	219 910	A	45.6%	437.2	A	57.1%
	Space heating	84 385	A	17.5%	211.2	A	27.6%
	Space cooling	61 219	A	12.7%	156.3	A	20.4%
	Lighting	125 518	A	26.0%	282.6	A	36.9%
	Windows/insulation	82 900	A	17.2%	167.0	A	21.8%
	Additions/reductions	22 226	A	4.6%	58.5	A	7.6%
	Other**	81 576	A	16.9%	164.5	A	21.5%

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Other includes all other commercial buildings. See Appendix C for more details.

** Other includes all other renovations not listed.

Please note that a building can have more than one type of renovation. As such, the sum of the renovated buildings will not add to the total number of buildings. The above noted renovations/retrofits were undertaken during the years 2005 to 2009 (in the last five years).

2 CLIMATE ZONE AND REGION

Table 2.1 – Building characteristics and energy use by climate zone and size

Climate zone	Building size	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
Atlantic	**Total**	**47 911**	**A**	**69.8**	**A**	**71.6**	**A**	**1.03**	**A**
	5000 square feet or less (465 m^2 or less)	25 313	A	5.4	A	7.0	A	1.29	A
	5001 to 10 000 square feet (466 to 929 m^2)	9 198	A	6.0	A	6.0	A	1.00	A
	10 001 to 50 000 square feet (930 to 4645 m^2)	10 335	A	19.7	A	16.6	A	0.84	A
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	2 591	B	20.9	A	21.0	A	1.00	A
	Over 200 000 square feet (Over 18 580 m^2)	–	F	–	F	–	F	1.18	A
Great Lakes	**Total**	**233 880**	**A**	**417.3**	**A**	**437.2**	**A**	**1.05**	**A**
	5000 square feet or less (465 m^2 or less)	116 427	A	29.9	A	49.4	A	1.65	A
	5001 to 10 000 square feet (466 to 929 m^2)	42 876	A	28.4	A	28.5	B	1.00	A
	10 001 to 50 000 square feet (930 to 4645 m^2)	57 478	A	121.6	A	120.4	A	0.99	A
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	13 666	A	112.1	A	108.4	A	0.97	A
	Over 200 000 square feet (Over 18 580 m^2)	3 434	B	125.2	B	130.5	B	1.04	A
Pacific Coast	**Total**	**38 092**	**A**	**64.6**	**A**	**64.0**	**B**	**0.99**	**A**
	5000 square feet or less (465 m^2 or less)	17 600	A	3.6	B	7.0	B	1.93	A
	5001 to 10 000 square feet (466 to 929 m^2)	5 439	C	–	F	3.8	C	1.04	B
	10 001 to 50 000 square feet (930 to 4645 m^2)	12 074	B	26.1	B	–	F	0.88	C
	50 001 to 200 000 square feet (4646 to 18,580 m^2)	2 721	B	22.3	A	23.1	A	1.03	A
	Over 200 000 square feet (Over 18 580 m^2)	259	C	9.0	B	7.3	B	0.81	A

(Continued)

Table 2.1 – Building characteristics and energy use by climate zone and size (continued)

Climate zone	Building size	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
Other*	**Total**	**162 383**	**A**	**214.2**	**A**	**269.4**	**A**	**1.26**	**A**
	5000 square feet or less (465 m^2 or less)	77 199	A	18.3	A	30.4	B	1.66	A
	5001 to 10 000 square feet (466 to 929 m^2)	34 168	A	23.5	A	34.4	A	1.46	A
	10 001 to 50 000 square feet (930 to 4645 m^2)	43 679	A	85.1	A	99.5	A	1.17	A
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	6 342	A	52.9	A	73.6	A	1.39	A
	Over 200 000 square feet (Over 18 580 m^2)	996	C	34.3	B	31.6	C	0.92	A
Canada	**Total**	**482 266**	**A**	**765.9**	**A**	**842.2**	**A**	**1.10**	**A**
	5000 square feet or less (465 m^2 or less)	236 539	A	57.3	A	93.8	A	1.64	A
	5001 to 10 000 square feet (466 to 929 m^2)	91 680	A	61.6	A	72.7	A	1.18	A
	10 001 to 50 000 square feet (930 to 4645 m^2)	123 565	A	252.4	A	259.3	A	1.03	A
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	25 319	A	208.3	A	226.1	A	1.09	A
	Over 200 000 square feet (Over 18 580 m^2)	5 162	A	186.4	A	190.4	A	1.02	A

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Other includes all other Canadian climate zones not listed.

Table 2.2 – Building characteristics and energy use by climate zone and year of construction

Climate zone	Year of construction	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
Atlantic	**Total**	**47 911**	**A**	**69.8**	**A**	**71.6**	**A**	**1.03**	**A**
	Before 1920	3 826	B	2.3	B	1.7	B	0.74	A
	1920 to 1959	8 892	A	6.6	A	6.4	A	0.97	A
	1960 to 1969	5 719	A	–	F	–	F	1.15	A
	1970 to 1979	6 942	A	14.2	A	14.5	A	1.02	A
	1980 to 1989	7 554	A	8.8	A	7.5	A	0.86	A
	1990 to 1999	8 060	A	9.9	B	10.5	B	1.06	A
	2000 or later	6 919	A	9.3	B	9.5	B	1.02	A
	2000 to 2004	4 103	B	3.0	A	3.4	A	1.13	A
	2005 or later	2 816	B	6.3	C	6.1	C	0.97	A
Great Lakes	**Total**	**233 880**	**A**	**417.3**	**A**	**437.2**	**A**	**1.05**	**A**
	Before 1920	30 361	B	36.2	A	35.5	A	0.98	A
	1920 to 1959	42 054	A	53.2	A	59.2	A	1.11	A
	1960 to 1969	32 615	A	70.5	A	57.6	A	0.82	A
	1970 to 1979	30 602	A	84.5	B	99.5	B	1.18	A
	1980 to 1989	45 955	A	56.7	A	62.4	A	1.10	A
	1990 to 1999	25 123	C	53.5	B	61.9	B	1.16	A
	2000 or later	27 169	A	62.6	A	61.2	A	0.98	A
	2000 to 2004	12 558	B	36.0	B	34.4	B	0.96	A
	2005 or later	14 612	B	26.6	C	26.7	C	1.00	B
Pacific Coast	**Total**	**38 092**	**A**	**64.6**	**A**	**64.0**	**B**	**0.99**	**A**
	Before 1920	2 677	C	4.1	C	3.8	C	0.92	B
	1920 to 1959	6 101	B	–	F	–	F	–	F
	1960 to 1969	–	F	–	F	7.0	B	0.82	B
	1970 to 1979	6 533	B	13.5	B	12.0	B	0.89	A
	1980 to 1989	7 199	B	9.5	B	10.0	C	1.05	A
	1990 to 1999	6 365	C	11.1	B	10.1	B	0.91	A
	2000 or later	5 048	C	11.9	C	13.7	B	1.15	B
	2000 to 2004	–	F	2.6	C	4.9	C	1.84	A
	2005 or later	–	F	–	F	8.8	C	0.95	B

(Continued)

Table 2.2 – Building characteristics and energy use by climate zone and year of construction (continued)

Climate zone	Year of construction	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
Other*	**Total**	**162 383**	**A**	**214.2**	**A**	**269.4**	**A**	**1.26**	**A**
	Before 1920	10 087	C	11.5	C	9.5	C	0.83	A
	1920 to 1959	26 474	A	25.3	A	26.0	B	1.03	A
	1960 to 1969	25 255	A	28.2	A	34.4	A	1.22	A
	1970 to 1979	31 030	A	46.5	A	57.1	A	1.23	A
	1980 to 1989	30 696	A	41.2	A	52.1	B	1.26	A
	1990 to 1999	18 559	A	30.8	B	37.6	B	1.22	A
	2000 or later	20 282	B	30.8	B	52.8	B	1.71	A
	2000 to 2004	10 411	B	13.7	B	–	F	2.29	B
	2005 or later	9 871	C	17.2	B	21.4	C	1.25	A
Canada	**Total**	**482 266**	**A**	**765.9**	**A**	**842.2**	**A**	**1.10**	**A**
	Before 1920	46 951	A	54.0	A	50.5	A	0.93	A
	1920 to 1959	83 521	A	91.1	A	98.9	A	1.09	A
	1960 to 1969	67 758	A	126.1	A	120.6	A	0.96	A
	1970 to 1979	75 107	A	158.6	A	183.1	A	1.15	A
	1980 to 1989	91 404	A	116.2	A	131.9	A	1.14	A
	1990 to 1999	58 106	A	105.3	A	120.1	A	1.14	A
	2000 or later	59 418	A	114.6	A	137.1	A	1.20	A
	2000 to 2004	29 316	A	55.3	A	74.0	B	1.34	A
	2005 or later	30 102	A	59.4	B	63.1	A	1.06	A

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Other includes all other Canadian climate zones not listed.

Table 2.3 – Building characteristics and energy use by climate zone and hours of operation

Climate zone	Hours of operation	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
Atlantic	**Total**	**47 911**	**A**	**69.8**	**A**	**71.6**	**A**	**1.03**	**A**
	36 or less	5 401	B	2.9	B	1.9	B	0.66	A
	37 to 48	13 518	A	15.1	A	11.4	A	0.76	A
	49 to 72	11 440	A	12.1	A	9.3	A	0.77	A
	73 to 96	4 054	B	9.9	C	8.7	B	0.88	A
	97 to 120	4 425	B	5.8	B	8.6	B	1.49	A
	121 to 168	9 074	A	24.1	C	31.7	C	1.32	A
Great Lakes	**Total**	**233 880**	**A**	**417.3**	**A**	**437.2**	**A**	**1.05**	**A**
	36 or less	24 713	B	14.7	A	12.3	A	0.84	A
	37 to 48	59 185	A	73.0	A	62.2	B	0.85	A
	49 to 72	77 861	A	135.4	A	109.6	A	0.81	A
	73 to 96	24 159	A	55.8	A	69.0	A	1.24	A
	97 to 120	18 632	B	34.0	B	50.3	B	1.48	A
	121 to 168	29 330	B	104.5	A	133.8	A	1.28	A
Pacific Coast	**Total**	**38 092**	**A**	**64.6**	**A**	**64.0**	**B**	**0.99**	**A**
	36 or less	–	F	2.0	C	1.3	C	0.67	A
	37 to 48	9 315	B	9.2	C	7.0	C	0.76	A
	49 to 72	12 623	B	21.4	B	18.3	B	0.85	A
	73 to 96	5 355	C	15.6	C	12.9	B	0.82	A
	97 to 120	–	F	5.7	C	9.2	B	1.61	B
	121 to 168	4 396	C	10.6	C	–	F	–	F

(Continued)

Table 2.3 – Building characteristics and energy use by climate zone and hours of operation (continued)

Climate zone	Hours of operation	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
Other*	**Total**	**162 383**	**A**	**214.2**	**A**	**269.4**	**A**	**1.26**	**A**
	36 or less	15 447	A	12.3	B	11.3	B	0.92	A
	37 to 48	50 371	A	50.9	A	47.8	A	0.94	A
	49 to 72	47 797	A	65.1	A	69.9	A	1.07	A
	73 to 96	13 812	B	27.7	B	38.7	B	1.40	A
	97 to 120	11 804	A	17.1	B	36.3	C	2.13	B
	121 to 168	23 152	A	41.2	A	65.5	B	1.59	A
Canada	**Total**	**482 266**	**A**	**765.9**	**A**	**842.2**	**A**	**1.10**	**A**
	36 or less	48 333	A	31.8	A	26.8	A	0.84	A
	37 to 48	132 389	A	148.2	A	128.4	A	0.87	A
	49 to 72	149 721	A	234.0	A	207.0	A	0.88	A
	73 to 96	47 380	A	109.0	A	129.2	A	1.18	A
	97 to 120	38 492	A	62.5	A	104.5	A	1.67	A
	121 to 168	65 951	A	180.4	A	246.3	A	1.37	A

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Other includes all other Canadian climate zones not listed.

Table 2.4 – Building characteristics and energy use by climate zone and primary activity

Climate zone	Primary activity	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
Atlantic	**Total**	**47 911**	**A**	**69.8**	**A**	**71.6**	**A**	**1.03**	**A**
	Office building (non-medical)	7 592	A	6.8	A	6.6	B	0.97	A
	Medical office building	735	B	0.7	B	0.6	B	0.80	A
	Elementary or secondary school	2 014	B	8.2	A	6.4	B	0.77	A
	Nursing or residential care facility	1 192	B	1.7	B	2.4	B	1.40	A
	Warehouse	2 578	B	4.2	B	2.0	B	0.47	A
	Hotel or motel	1 988	C	1.6	A	1.8	A	1.09	A
	Hospital	121	B	2.4	B	6.3	B	2.61	A
	Food or beverage store	5 395	A	3.5	C	7.8	C	2.22	A
	Non-food retail store	3 406	B	6.8	C	5.2	C	0.76	A
	Other**	22 891	A	33.8	B	32.6	C	0.96	A
Great Lakes	**Total**	**233 880**	**A**	**417.3**	**A**	**437.2**	**A**	**1.05**	**A**
	Office building (non-medical)	37 484	A	87.2	B	99.3	B	1.14	A
	Medical office building	3 914	B	3.1	B	3.6	B	1.17	A
	Elementary or secondary school	9 170	A	40.7	A	32.2	A	0.79	A
	Nursing or residential care facility	2 144	B	17.7	C	24.4	C	1.38	A
	Warehouse	15 006	B	56.6	B	32.4	B	0.57	A
	Hotel or motel	3 139	C	6.3	C	8.2	C	1.31	B
	Hospital	230	A	8.2	A	20.6	A	2.49	A
	Food or beverage store	18 535	A	15.5	B	45.2	B	2.92	A
	Non-food retail store	24 220	B	21.2	B	18.0	B	0.85	A
	Other**	120 039	A	160.8	A	153.2	A	0.95	A
Pacific Coast	**Total**	**38 092**	**A**	**64.6**	**A**	**64.0**	**B**	**0.99**	**A**
	Office building (non-medical)	5 056	C	12.5	B	11.9	B	0.95	A
	Medical office building	832	C	1.3	B	1.4	C	1.05	A
	Elementary or secondary school	2 271	B	7.6	A	4.8	A	0.64	A
	Nursing or residential care facility	563	A	0.8	B	1.2	B	1.44	A
	Warehouse	–	F	–	F	–	F	0.86	B
	Hotel or motel	–	F	2.4	B	2.6	B	1.11	A
	Hospital	90	A	1.5	B	2.4	B	1.58	A
	Food or beverage store	4 095	B	2.6	B	7.6	B	2.89	A
	Non-food retail store	6 475	B	–	F	5.3	C	0.65	B
	Other**	15 429	B	21.6	B	–	F	1.00	C

(Continued)

Table 2.4 – Building characteristics and energy use by climate zone and primary activity (continued)

Climate zone	Primary activity	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
Other*	**Total**	**162 383**	**A**	**214.2**	**A**	**269.4**	**A**	**1.26**	**A**
	Office building (non-medical)	33 451	A	41.1	A	58.8	B	1.43	A
	Medical office building	5 043	B	4.5	B	4.9	B	1.09	A
	Elementary or secondary school	4 970	A	27.0	A	21.0	A	0.78	A
	Nursing or residential care facility	2 583	A	4.8	A	11.1	B	2.32	A
	Warehouse	12 966	B	16.1	A	15.3	A	0.95	A
	Hotel or motel	–	F	–	F	–	F	1.47	A
	Hospital	311	A	2.9	A	7.3	B	2.50	A
	Food or beverage store	12 379	A	7.7	A	22.0	A	2.87	A
	Non-food retail store	22 649	B	32.7	B	36.7	C	1.12	A
	Other**	64 146	A	68.1	A	78.4	A	1.15	A
Canada	**Total**	**482 266**	**A**	**765.9**	**A**	**842.2**	**A**	**1.10**	**A**
	Office building (non-medical)	83 583	A	147.5	A	176.6	A	1.20	A
	Medical office building	10 525	A	9.6	A	10.5	A	1.09	A
	Elementary or secondary school	18 425	A	83.6	A	64.4	A	0.77	A
	Nursing or residential care facility	6 482	A	25.0	B	39.1	B	1.56	A
	Warehouse	32 879	A	83.0	A	55.0	A	0.66	A
	Hotel or motel	9 963	C	19.7	B	26.5	C	1.35	A
	Hospital	752	A	15.1	A	36.5	A	2.42	A
	Food or beverage store	40 403	A	29.3	A	82.7	A	2.82	A
	Non-food retail store	56 750	A	68.9	A	65.2	A	0.95	A
	Other**	222 505	A	284.3	A	285.8	A	1.01	A

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Other includes all other Canadian climate zones not listed.

** Other includes all other commercial buildings. See Appendix C for more details.

Table 2.5 – Building characteristics by climate zone and type of renovation

Climate zone	Type of renovation	Buildings	Q.I.	Share of total buildings	Floor space (millions of m^2)	Q.I.	Share of total floor space
Atlantic	**Total**	**47 911**	**A**		**69.8**	**A**	
	No renovation	25 756	A	53.8%	23.4	A	33.5%
	Any type of renovation	22 155	A	46.2%	46.4	B	66.5%
	Space heating	7 616	A	15.9%	26.6	C	38.1%
	Space cooling	5 441	A	11.4%	–	F	–
	Lighting	10 108	A	21.1%	27.7	C	39.7%
	Windows/insulation	10 444	A	21.8%	23.5	C	33.7%
	Additions/reductions	1 832	B	3.8%	–	F	–
	Other**	9 875	A	20.6%	24.0	C	34.3%
Great Lakes	**Total**	**233 880**	**A**		**417.3**	**A**	
	No renovation	112 596	A	48.1%	164.9	A	39.5%
	Any type of renovation	121 284	A	51.9%	252.4	A	60.5%
	Space heating	49 455	A	21.1%	127.2	A	30.5%
	Space cooling	36 185	A	15.5%	87.0	A	20.8%
	Lighting	75 126	A	32.1%	165.4	A	39.6%
	Windows/insulation	42 154	A	18.0%	95.2	A	22.8%
	Additions/reductions	12 133	B	5.2%	28.1	B	6.7%
	Other**	43 691	A	18.7%	88.4	A	21.2%
Pacific Coast	**Total**	**38 092**	**A**		**64.6**	**A**	
	No renovation	21 201	A	55.7%	30.9	A	47.8%
	Any type of renovation	16 891	B	44.3%	33.7	B	52.2%
	Space heating	6 417	C	16.8%	15.2	B	23.5%
	Space cooling	–	F	–	11.5	C	17.8%
	Lighting	12 726	B	33.4%	26.0	A	40.2%
	Windows/insulation	–	F	–	–	F	–
	Additions/reductions	–	F	–	–	F	–
	Other**	–	F	–	–	F	–

(Continued)

Table 2.5 – Building characteristics by climate zone and type of renovation (continued)

Climate zone	Type of renovation	Buildings	Q.I.	Share of total buildings	Floor space (millions of m^2)	Q.I.	Share of total floor space
Other*	**Total**	**162 383**	**A**		**214.2**	**A**	
	No renovation	102 802	A	63.3%	109.6	A	51.1%
	Any type of renovation	59 581	A	36.7%	104.7	A	48.9%
	Space heating	20 897	A	12.9%	42.2	A	19.7%
	Space cooling	14 931	A	9.2%	36.2	A	16.9%
	Lighting	27 558	A	17.0%	63.5	A	29.6%
	Windows/insulation	24 190	A	14.9%	37.8	A	17.6%
	Additions/reductions	6 463	B	4.0%	11.0	C	5.1%
	Other**	23 122	A	14.2%	39.6	A	18.5%
Canada	**Total**	**482 266**	**A**		**765.9**	**A**	
	No renovation	262 355	A	54.4%	328.7	A	42.9%
	Any type of renovation	219 910	A	45.6%	437.2	A	57.1%
	Space heating	84 385	A	17.5%	211.2	A	27.6%
	Space cooling	61 219	A	12.7%	156.3	A	20.4%
	Lighting	125 518	A	26.0%	282.6	A	36.9%
	Windows/insulation	82 900	A	17.2%	167.0	A	21.8%
	Additions/reductions	22 226	A	4.6%	58.5	A	7.6%
	Other**	81 576	A	16.9%	164.5	A	21.5%

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Other includes all other Canadian climate zones not listed.

** Other includes all other renovations not listed.

Please note that a building can have more than one type of renovation. As such, the sum of the renovated buildings will not add to the total number of buildings. The above noted renovations/retrofits were undertaken during the years 2005 to 2009 (in the last five years).

Table 2.6 – Building characteristics by climate zone and energy efficiency features

Climate zone	Energy efficiency feature	Buildings	Q.I.	Share of total buildings	Floor space (millions of m²)	Q.I.	Share of total floor space
Atlantic	**Total**	**47 911**	**A**		**69.8**	**A**	
	Any energy efficiency feature	18 843	A	39.3%	45.9	B	65.7%
	Energy conservation awareness program	9 819	A	20.5%	29.4	C	42.1%
	Energy management control system for heating, ventilating and cooling (HVAC)	12 709	A	26.5%	40.9	B	58.6%
	Energy management control system for lighting	5 734	A	12.0%	–	F	–
Great Lakes	**Total**	**233 880**	**A**		**417.3**	**A**	
	Any energy efficiency feature	111 719	A	47.8%	295.3	A	70.8%
	Energy conservation awareness program	59 975	A	25.6%	209.0	A	50.1%
	Energy management control system for heating, ventilating and cooling (HVAC)	80 380	A	34.4%	238.3	A	57.1%
	Energy management control system for lighting	43 123	A	18.4%	164.8	A	39.5%
Pacific Coast	**Total**	**38 092**	**A**		**64.6**	**A**	
	Any energy efficiency feature	21 732	A	57.1%	48.2	A	74.6%
	Energy conservation awareness program	10 142	B	26.6%	26.9	A	41.6%
	Energy management control system for heating, ventilating and cooling (HVAC)	16 308	B	42.8%	39.8	A	61.7%
	Energy management control system for lighting	9 617	B	25.2%	25.8	A	39.9%
Other*	**Total**	**162 383**	**A**		**214.2**	**A**	
	Any energy efficiency feature	63 693	A	39.2%	129.8	A	60.6%
	Energy conservation awareness program	30 653	B	18.9%	75.4	A	35.2%
	Energy management control system for heating, ventilating and cooling (HVAC)	48 014	A	29.6%	108.8	A	50.8%
	Energy management control system for lighting	21 058	B	13.0%	53.7	A	25.1%
Canada	**Total**	**482 266**	**A**		**765.9**	**A**	
	Any energy efficiency feature	215 987	A	44.8%	519.2	A	67.8%
	Energy conservation awareness program	110 590	A	22.9%	340.7	A	44.5%
	Energy management control system for heating, ventilating and cooling (HVAC)	157 410	A	32.6%	427.8	A	55.9%
	Energy management control system for lighting	79 533	A	16.5%	265.7	A	34.7%

Note that a building may have more than one energy efficiency feature

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Other includes all other Canadian climate zones not listed.

3 RENOVATIONS

Table 3.1 – Characteristics of buildings with any type of renovation

Any type of renovation	Building characteristics	All buildings		Renovated buildings		Share
			Q.I.		Q.I.	
Building size	**All building sizes**	**482 266**	**A**	**219 910**	**A**	**45.6%**
	5000 square feet or less (465 m^2 or less)	236 539	A	106 181	A	44.9%
	5001 to 10 000 square feet (466 to 929 m^2)	91 680	A	35 529	A	38.8%
	10 001 to 50 000 square feet (930 to 4645 m^2)	123 565	A	59 954	A	48.5%
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	25 319	A	14 714	A	58.1%
	Over 200 000 square feet (Over 18 580 m^2)	5 162	A	3 532	A	68.4%
Year of construction	**All years of construction**	**482 266**	**A**	**219 910**	**A**	**45.6%**
	Before 1920	46 951	A	29 609	B	63.1%
	1920 to 1959	83 521	A	48 038	A	57.5%
	1960 to 1969	67 758	A	36 610	A	54.0%
	1970 to 1979	75 107	A	28 263	A	37.6%
	1980 to 1989	91 404	A	42 664	A	46.7%
	1990 to 1999	58 106	A	17 396	A	29.9%
	2000 or later	59 418	A	17 331	B	29.2%
	2000 to 2004	29 316	A	4 013	B	13.7%
	2005 or later	30 102	A	13 317	B	44.2%
Hours of operation	**All operating hours**	**482 266**	**A**	**219 910**	**A**	**45.6%**
	36 or less	48 333	A	22 775	A	47.1%
	37 to 48	132 389	A	56 978	A	43.0%
	49 to 72	149 721	A	68 251	A	45.6%
	73 to 96	47 380	A	24 900	A	52.6%
	97 to 120	38 492	A	16 267	B	42.3%
	121 to 168	65 951	A	30 740	A	46.6%

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

The renovations/retrofits noted above were undertaken during the years 2005 to 2009 (in the last five years).

Table 3.2 – Characteristics of buildings with space heating renovations

Space heating	Building characteristics	All buildings		Renovated buildings		Share
			Q.I.		Q.I.	
Building size	**All building sizes**	**482 266**	**A**	**84 385**	**A**	**17.5%**
	5000 square feet or less (465 m^2 or less)	236 539	A	34 306	A	14.5%
	5001 to 10 000 square feet (466 to 929 m^2)	91 680	A	16 644	B	18.2%
	10 001 to 50 000 square feet (930 to 4645 m^2)	123 565	A	25 426	A	20.6%
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	25 319	A	6 096	A	24.1%
	Over 200 000 square feet (Over 18 580 m^2)	5 162	A	1 912	B	37.0%
Year of construction	**All years of construction**	**482 266**	**A**	**84 385**	**A**	**17.5%**
	Before 1920	46 951	A	11 811	C	25.2%
	1920 to 1959	83 521	A	15 434	A	18.5%
	1960 to 1969	67 758	A	14 270	A	21.1%
	1970 to 1979	75 107	A	11 759	B	15.7%
	1980 to 1989	91 404	A	15 808	B	17.3%
	1990 to 1999	58 106	A	3 962	B	6.8%
	2000 or later	59 418	A	11 341	B	19.1%
	2000 to 2004	29 316	A	–	F	–
	2005 or later	30 102	A	10 373	C	34.5%
Hours of operation	**All operating hours**	**482 266**	**A**	**84 385**	**A**	**17.5%**
	36 or less	48 333	A	6 986	B	14.5%
	37 to 48	132 389	A	23 246	A	17.6%
	49 to 72	149 721	A	29 418	A	19.6%
	73 to 96	47 380	A	10 990	B	23.2%
	97 to 120	38 492	A	6 856	C	17.8%
	121 to 168	65 951	A	6 889	A	10.4%

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

The renovations/retrofits noted above were undertaken during the years 2005 to 2009 (in the last five years).

Table 3.3 – Characteristics of buildings with space cooling renovations

Space cooling	Building characteristics	All buildings		Renovated buildings		Share
			Q.I.		Q.I.	
Building size	**All building sizes**	**482 266**	**A**	**61 219**	**A**	**12.7%**
	5000 square feet or less (465 m^2 or less)	236 539	A	28 248	A	11.9%
	5001 to 10 000 square feet (466 to 929 m^2)	91 680	A	9 467	B	10.3%
	10 001 to 50 000 square feet (930 to 4645 m^2)	123 565	A	17 606	A	14.2%
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	25 319	A	4 592	B	18.1%
	Over 200 000 square feet (Over 18 580 m^2)	5 162	A	1 306	A	25.3%
Year of construction	**All years of construction**	**482 266**	**A**	**61 219**	**A**	**12.7%**
	Before 1920	46 951	A	5 560	C	11.8%
	1920 to 1959	83 521	A	9 806	B	11.7%
	1960 to 1969	67 758	A	9 931	A	14.7%
	1970 to 1979	75 107	A	7 254	A	9.7%
	1980 to 1989	91 404	A	14 420	B	15.8%
	1990 to 1999	58 106	A	5 131	C	8.8%
	2000 or later	59 418	A	9 117	B	15.3%
	2000 to 2004	29 316	A	–	F	–
	2005 or later	30 102	A	8 372	C	27.8%
Hours of operation	**All operating hours**	**482 266**	**A**	**61 219**	**A**	**12.7%**
	36 or less	48 333	A	2 090	C	4.3%
	37 to 48	132 389	A	14 348	B	10.8%
	49 to 72	149 721	A	23 150	A	15.5%
	73 to 96	47 380	A	9 943	C	21.0%
	97 to 120	38 492	A	3 373	C	8.8%
	121 to 168	65 951	A	8 315	A	12.6%

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

The renovations/retrofits noted above were undertaken during the years 2005 to 2009 (in the last five years).

Table 3.4 – Characteristics of buildings with lighting renovations

Lighting	Building characteristics	All buildings		Renovated buildings		Share
			Q.I.		Q.I.	
Building size	**All building sizes**	**482 266**	**A**	**125 518**	**A**	**26.0%**
	5000 square feet or less (465 m^2 or less)	236 539	A	62 042	A	26.2%
	5001 to 10 000 square feet (466 to 929 m^2)	91 680	A	17 376	B	19.0%
	10 001 to 50 000 square feet (930 to 4645 m^2)	123 565	A	33 324	A	27.0%
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	25 319	A	10 066	A	39.8%
	Over 200 000 square feet (Over 18 580 m^2)	5 162	A	2 710	B	52.5%
Year of construction	**All years of construction**	**482 266**	**A**	**125 518**	**A**	**26.0%**
	Before 1920	46 951	A	18 298	B	39.0%
	1920 to 1959	83 521	A	26 756	A	32.0%
	1960 to 1969	67 758	A	21 028	A	31.0%
	1970 to 1979	75 107	A	13 446	B	17.9%
	1980 to 1989	91 404	A	22 417	B	24.5%
	1990 to 1999	58 106	A	10 403	A	17.9%
	2000 or later	59 418	A	13 171	B	22.2%
	2000 to 2004	29 316	A	2 656	B	9.1%
	2005 or later	30 102	A	10 514	C	34.9%
Hours of operation	**All operating hours**	**482 266**	**A**	**125 518**	**A**	**26.0%**
	36 or less	48 333	A	–	F	–
	37 to 48	132 389	A	38 276	A	28.9%
	49 to 72	149 721	A	44 437	A	29.7%
	73 to 96	47 380	A	14 612	B	30.8%
	97 to 120	38 492	A	6 513	B	16.9%
	121 to 168	65 951	A	14 374	A	21.8%

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

The renovations/retrofits noted above were undertaken during the years 2005 to 2009 (in the last five years).

Table 3.5 – Characteristics of buildings with windows/insulation renovations

Windows/ insulation	Building characteristics	All buildings		Renovated buildings		
			Q.I.		Q.I.	Share
Building size	**All building sizes**	**482 266**	**A**	**82 900**	**A**	**17.2%**
	5000 square feet or less (465 m^2 or less)	236 539	A	37 285	A	15.8%
	5001 to 10 000 square feet (466 to 929 m^2)	91 680	A	12 339	C	13.5%
	10 001 to 50 000 square feet (930 to 4645 m^2)	123 565	A	26 247	A	21.2%
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	25 319	A	5 682	B	22.4%
	Over 200 000 square feet (Over 18 580 m^2)	5 162	A	1 347	B	26.1%
Year of construction	**All years of construction**	**482 266**	**A**	**82 900**	**A**	**17.2%**
	Before 1920	46 951	A	13 669	B	29.1%
	1920 to 1959	83 521	A	22 950	A	27.5%
	1960 to 1969	67 758	A	11 721	A	17.3%
	1970 to 1979	75 107	A	9 041	A	12.0%
	1980 to 1989	91 404	A	13 581	B	14.9%
	1990 to 1999	58 106	A	2 445	B	4.2%
	2000 or later	59 418	A	9 494	C	16.0%
	2000 to 2004	29 316	A	–	F	–
	2005 or later	30 102	A	8 813	C	29.3%
Hours of operation	**All operating hours**	**482 266**	**A**	**82 900**	**A**	**17.2%**
	36 or less	48 333	A	5 757	C	11.9%
	37 to 48	132 389	A	24 488	A	18.5%
	49 to 72	149 721	A	25 141	A	16.8%
	73 to 96	47 380	A	8 724	B	18.4%
	97 to 120	38 492	A	5 254	B	13.6%
	121 to 168	65 951	A	13 536	B	20.5%

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

The renovations/retrofits noted above were undertaken during the years 2005 to 2009 (in the last five years).

Table 3.6 – Characteristics of buildings with any other* type of renovations

	Building characteristics	All buildings		Renovated buildings		
			Q.I.		Q.I.	Share
Building size	**All building sizes**	**482 266**	**A**	**93 789**	**A**	**19.4%**
	5000 square feet or less (465 m^2 or less)	236 539	A	49 456	A	20.9%
	5001 to 10 000 square feet (466 to 929 m^2)	91 680	A	12 182	B	13.3%
	10 001 to 50 000 square feet (930 to 4645 m^2)	123 565	A	25 009	A	20.2%
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	25 319	A	5 375	B	21.2%
	Over 200 000 square feet (Over 18 580 m^2)	5 162	A	1 766	B	34.2%
Year of construction	**All years of construction**	**482 266**	**A**	**93 789**	**A**	**19.4%**
	Before 1920	46 951	A	15 050	C	32.1%
	1920 to 1959	83 521	A	21 836	A	26.1%
	1960 to 1969	67 758	A	12 508	A	18.5%
	1970 to 1979	75 107	A	10 562	A	14.1%
	1980 to 1989	91 404	A	16 852	B	18.4%
	1990 to 1999	58 106	A	5 187	B	8.9%
	2000 or later	59 418	A	11 794	B	19.8%
	2000 to 2004	29 316	A	–	F	–
	2005 or later	30 102	A	10 907	B	36.2%
Hours of operation	**All operating hours**	**482 266**	**A**	**93 789**	**A**	**19.4%**
	36 or less	48 333	A	10 635	B	22.0%
	37 to 48	132 389	A	21 458	B	16.2%
	49 to 72	149 721	A	31 872	A	21.3%
	73 to 96	47 380	A	11 616	B	24.5%
	97 to 120	38 492	A	5 465	B	14.2%
	121 to 168	65 951	A	12 742	A	19.3%

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Any other includes all renovations other than space heating/cooling, lighting, windows and insulation. This is different than Tables 1.9 and 1.18 since addition and reduction were separated.

The renovations/retrofits noted above were undertaken during the years 2005 to 2009 (in the last five years).

4 ENERGY USE

Table 4.1 – Characteristics of buildings using electricity

Electricity use	Building characteristics	All buildings		Buildings that use electricity		Share
			Q.I.		Q.I.	
Climate zone	**All climate zones**	**482 266**	**A**	**471 117**	**A**	**97.7%**
	Atlantic	47 911	A	46 404	A	96.9%
	Great Lakes	233 880	A	229 605	A	98.2%
	Pacific Coast	38 092	A	37 229	A	97.7%
	Other*	162 383	A	157 879	A	97.2%
Primary activity	**All primary activities**	**482 266**	**A**	**471 117**	**A**	**97.7%**
	Office building (non-medical)	83 583	A	83 259	A	99.6%
	Medical office building	10 525	A	10 524	A	100.0%
	Elementary or secondary school	18 425	A	18 331	A	99.5%
	Nursing or residential care facility	6 482	A	6 253	A	96.5%
	Warehouse	32 879	A	30 494	A	92.7%
	Hotel or motel	9 963	C	9 817	B	98.5%
	Hospital	752	A	752	A	100.0%
	Food or beverage store	40 403	A	40 403	A	100.0%
	Non-food retail store	56 750	A	55 477	A	97.8%
	Other**	222 505	A	215 807	A	97.0%
Building size	**All building sizes**	**482 266**	**A**	**471 117**	**A**	**97.7%**
	5000 square feet or less (465 m^2 or less)	236 539	A	230 128	A	97.3%
	5001 to 10 000 square feet (466 to 929 m^2)	91 680	A	88 788	A	96.8%
	10 001 to 50 000 square feet (930 to 4645 m^2)	123 565	A	122 065	A	98.8%
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	25 319	A	25 002	A	98.7%
	Over 200 000 square feet (Over 18 580 m^2)	5 162	A	5 134	A	99.5%

(Continued)

Table 4.1 – Characteristics of buildings using electricity (continued)

Electricity use	Building characteristics	All buildings		Buildings that use electricity		Share
			Q.I.		Q.I.	
Year of construction	**All years of construction**	**482 266**	**A**	**471 117**	**A**	**97.7%**
	Before 1920	46 951	A	45 654	A	97.2%
	1920 to 1959	83 521	A	82 099	A	98.3%
	1960 to 1969	67 758	A	64 616	A	95.4%
	1970 to 1979	75 107	A	74 292	A	98.9%
	1980 to 1989	91 404	A	89 927	A	98.4%
	1990 to 1999	58 106	A	57 942	A	99.7%
	2000 or later	59 418	A	56 589	A	95.2%
	2000 to 2004	29 316	A	26 685	A	91.0%
	2005 or later	30 102	A	29 904	A	99.3%
Hours of operation	**All operating hours**	**482 266**	**A**	**471 117**	**A**	**97.7%**
	36 or less	48 333	A	47 030	A	97.3%
	37 to 48	132 389	A	127 923	A	96.6%
	49 to 72	149 721	A	148 065	A	98.9%
	73 to 96	47 380	A	46 091	A	97.3%
	97 to 120	38 492	A	38 345	A	99.6%
	121 to 168	65 951	A	63 664	A	96.5%

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Other includes all other Canadian climate zones not listed.

** Other includes all other commercial buildings. See Appendix C for more details.

Table 4.2 – Characteristics of buildings using natural gas

Natural gas use	Building characteristics	All buildings		Buildings that use natural gas		Share
			Q.I.		Q.I.	
Climate zone	**All climate zones**	**482 266**	**A**	**305 665**	**A**	**63.4%**
	Atlantic	47 911	A	3 018	B	6.3%
	Great Lakes	233 880	A	147 968	A	63.3%
	Pacific Coast	38 092	A	26 149	A	68.6%
	Other*	162 383	A	128 530	A	79.2%
Primary activity	**All primary activities**	**482 266**	**A**	**305 665**	**A**	**63.4%**
	Office building (non-medical)	83 583	A	56 981	A	68.2%
	Medical office building	10 525	A	6 999	B	66.5%
	Elementary or secondary school	18 425	A	13 585	A	73.7%
	Nursing or residential care facility	6 482	A	4 548	A	70.2%
	Warehouse	32 879	A	26 661	A	81.1%
	Hotel or motel	9 963	C	4 102	A	41.2%
	Hospital	752	A	558	A	74.2%
	Food or beverage store	40 403	A	28 251	A	69.9%
	Non-food retail store	56 750	A	32 022	A	56.4%
	Other**	222 505	A	131 956	A	59.3%
Building size	**All building sizes**	**482 266**	**A**	**305 665**	**A**	**63.4%**
	5000 square feet or less (465 m^2 or less)	236 539	A	132 689	A	56.1%
	5001 to 10 000 square feet (466 to 929 m^2)	91 680	A	52 081	A	56.8%
	10 001 to 50 000 square feet (930 to 4645 m^2)	123 565	A	97 261	A	78.7%
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	25 319	A	19 748	A	78.0%
	Over 200 000 square feet (Over 18 580 m^2)	5 162	A	3 887	A	75.3%

(Continued)

Table 4.2 – Characteristics of buildings using natural gas (continued)

Natural gas use	Building characteristics	All buildings		Buildings that use natural gas		Share
			Q.I.		Q.I.	
Year of construction	**All years of construction**	**482 266**	**A**	**305 665**	**A**	**63.4%**
	Before 1920	46 951	A	28 970	A	61.7%
	1920 to 1959	83 521	A	49 731	A	59.5%
	1960 to 1969	67 758	A	47 855	A	70.6%
	1970 to 1979	75 107	A	50 982	A	67.9%
	1980 to 1989	91 404	A	55 140	A	60.3%
	1990 to 1999	58 106	A	29 908	A	51.5%
	2000 or later	59 418	A	43 079	A	72.5%
	2000 to 2004	29 316	A	21 166	B	72.2%
	2005 or later	30 102	A	21 914	B	72.8%
Hours of operation	**All operating hours**	**482 266**	**A**	**305 665**	**A**	**63.4%**
	36 or less	48 333	A	26 320	A	54.5%
	37 to 48	132 389	A	81 762	A	61.8%
	49 to 72	149 721	A	101 320	A	67.7%
	73 to 96	47 380	A	33 033	A	69.7%
	97 to 120	38 492	A	28 287	A	73.5%
	121 to 168	65 951	A	34 944	A	53.0%

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Other includes all other Canadian climate zones not listed.

** Other includes all other commercial buildings. See Appendix C for more details.

Table 4.3 – Characteristics of buildings using distillates*

Distillates use	Building characteristics	All buildings		Buildings that use distillates		Share
			Q.I.		Q.I.	
Climate zone	**All climate zones**	**482 266**	**A**	**62 846**	**A**	**13.0%**
	Atlantic	47 911	A	22 147	A	46.2%
	Great Lakes	233 880	A	30 867	B	13.2%
	Pacific Coast	38 092	A	–	F	–
	Other**	162 383	A	8 359	C	5.1%
Primary activity	**All primary activities**	**482 266**	**A**	**62 846**	**A**	**13.0%**
	Office building (non-medical)	83 583	A	7 581	B	9.1%
	Medical office building	10 525	A	–	F	–
	Elementary or secondary school	18 425	A	2 515	A	13.6%
	Nursing or residential care facility	6 482	A	980	A	15.1%
	Warehouse	32 879	A	1 636	C	5.0%
	Hotel or motel	9 963	C	–	F	–
	Hospital	752	A	324	A	43.1%
	Food or beverage store	40 403	A	3 792	C	9.4%
	Non-food retail store	56 750	A	8 197	C	14.4%
	Other***	222 505	A	36 693	B	16.5%
Building size	**All building sizes**	**482 266**	**A**	**62 846**	**A**	**13.0%**
	5000 square feet or less (465 m^2 or less)	236 539	A	28 648	A	12.1%
	5001 to 10 000 square feet (466 to 929 m^2)	91 680	A	19 604	B	21.4%
	10 001 to 50 000 square feet (930 to 4645 m^2)	123 565	A	10 484	B	8.5%
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	25 319	A	2 656	A	10.5%
	Over 200 000 square feet (Over 18 580 m^2)	5 162	A	1 454	B	28.2%

(Continued)

Table 4.3 – Characteristics of buildings using distillates* (continued)

Distillates use	Building characteristics	All buildings	Q.I.	Buildings that use distillates	Q.I.	Share
Year of construction	**All years of construction**	**482 266**	**A**	**62 846**	**A**	**13.0%**
	Before 1920	46 951	A	12 923	C	27.5%
	1920 to 1959	83 521	A	17 521	C	21.0%
	1960 to 1969	67 758	A	9 499	C	14.0%
	1970 to 1979	75 107	A	7 575	B	10.1%
	1980 to 1989	91 404	A	–	F	–
	1990 to 1999	58 106	A	3 366	B	5.8%
	2000 or later	59 418	A	4 086	B	6.9%
	2000 to 2004	29 316	A	2 669	B	9.1%
	2005 or later	30 102	A	–	F	–
Hours of operation	**All operating hours**	**482 266**	**A**	**62 846**	**A**	**13.0%**
	36 or less	48 333	A	12 667	B	26.2%
	37 to 48	132 389	A	12 822	B	9.7%
	49 to 72	149 721	A	20 070	B	13.4%
	73 to 96	47 380	A	2 776	B	5.9%
	97 to 120	38 492	A	4 482	C	11.6%
	121 to 168	65 951	A	10 028	C	15.2%

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Distillates include light fuel oil, diesel and kerosene.

** Other includes all other Canadian climate zones not listed.

*** Other includes all other commercial buildings. See Appendix C for more details.

Table 4.4 – Characteristics of buildings using propane

Propane use	Building characteristics	All buildings		Buildings that use propane		Share
			Q.I.		Q.I.	
Climate zone	**All climate zones**	**482 266**	**A**	**27 508**	**A**	**5.7%**
	Atlantic	47 911	A	5 977	A	12.5%
	Great Lakes	233 880	A	11 796	C	5.0%
	Pacific Coast	38 092	A	–	F	–
	Other*	162 383	A	–	F	–
Primary activity	**All primary activities**	**482 266**	**A**	**27 508**	**A**	**5.7%**
	Office building (non-medical)	83 583	A	–	F	–
	Medical office building	10 525	A	–	F	–
	Elementary or secondary school	18 425	A	–	F	–
	Nursing or residential care facility	6 482	A	323	C	5.0%
	Warehouse	32 879	A	–	F	–
	Hotel or motel	9 963	C	–	F	–
	Hospital	752	A	93	C	12.4%
	Food or beverage store	40 403	A	4 281	B	10.6%
	Non-food retail store	56 750	A	–	F	–
	Other**	222 505	A	14 526	B	6.5%
Building size	**All building sizes**	**482 266**	**A**	**27 508**	**A**	**5.7%**
	5000 square feet or less (465 m^2 or less)	236 539	A	14 229	B	6.0%
	5001 to 10 000 square feet (466 to 929 m^2)	91 680	A	8 120	C	8.9%
	10 001 to 50 000 square feet (930 to 4645 m^2)	123 565	A	–	F	–
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	25 319	A	1 460	C	5.8%
	Over 200 000 square feet (Over 18 580 m^2)	5 162	A	–	F	–

(Continued)

Table 4.4 – Characteristics of buildings using propane (continued)

Propane use	Building characteristics	All buildings		Buildings that use propane		Share
			Q.I.		Q.I.	
Year of construction	**All years of construction**	**482 266**	**A**	**27 508**	**A**	**5.7%**
	Before 1920	46 951	A	–	F	–
	1920 to 1959	83 521	A	–	F	–
	1960 to 1969	67 758	A	–	F	–
	1970 to 1979	75 107	A	3 420	B	4.6%
	1980 to 1989	91 404	A	9 443	C	10.3%
	1990 to 1999	58 106	A	4 379	C	7.5%
	2000 or later	59 418	A	2 472	B	4.2%
	2000 to 2004	29 316	A	1 262	C	4.3%
	2005 or later	30 102	A	1 209	C	4.0%
Hours of operation	**All operating hours**	**482 266**	**A**	**27 508**	**A**	**5.7%**
	36 or less	48 333	A	–	F	–
	37 to 48	132 389	A	–	F	–
	49 to 72	149 721	A	7 286	B	4.9%
	73 to 96	47 380	A	3 369	C	7.1%
	97 to 120	38 492	A	–	F	–
	121 to 168	65 951	A	–	F	–

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Other includes all other Canadian climate zones not listed.

** Other includes all other commercial buildings. See Appendix C for more details.

Table 4.5 – Characteristics of buildings using other fuels*

Other fuel use	Building characteristics	All buildings		Buildings that use other fuels		Share
			Q.I.		Q.I.	
Climate zone	**All climate zones**	**482 266**	**A**	**23 519**	**A**	**4.9%**
	Atlantic	47 911	A	4 806	B	10.0%
	Great Lakes	233 880	A	10 138	B	4.3%
	Pacific Coast	38 092	A	–	F	–
	Other**	162 383	A	–	F	–
Primary activity	**All primary activities**	**482 266**	**A**	**23 519**	**A**	**4.9%**
	Office building (non-medical)	83 583	A	–	F	–
	Medical office building	10 525	A	15	C	0.1%
	Elementary or secondary school	18 425	A	–	F	–
	Nursing or residential care facility	6 482	A	569	C	8.8%
	Warehouse	32 879	A	–	F	–
	Hotel or motel	9 963	C	–	F	–
	Hospital	752	A	89	B	11.8%
	Food or beverage store	40 403	A	1 425	C	3.5%
	Non-food retail store	56 750	A	–	F	–
	Other***	222 505	A	15 124	B	6.8%
Building size	**All building sizes**	**482 266**	**A**	**23 519**	**A**	**4.9%**
	5000 square feet or less (465 m^2 or less)	236 539	A	8 663	C	3.7%
	5001 to 10 000 square feet (466 to 929 m^2)	91 680	A	–	F	–
	10 001 to 50 000 square feet (930 to 4645 m^2)	123 565	A	6 201	B	5.0%
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	25 319	A	3 085	C	12.2%
	Over 200 000 square feet (Over 18 580 m^2)	5 162	A	902	C	17.5%

(Continued)

Table 4.5 – Characteristics of buildings using other fuels* (continued)

Other fuel use	Building characteristics	All buildings		Buildings that use other fuels		Share
			Q.I.		Q.I.	
Year of construction	**All years of construction**	**482 266**	**A**	**23 519**	**A**	**4.9%**
	Before 1920	46 951	A	4 154	C	8.8%
	1920 to 1959	83 521	A	3 310	C	4.0%
	1960 to 1969	67 758	A	–	F	–
	1970 to 1979	75 107	A	1 770	B	2.4%
	1980 to 1989	91 404	A	–	F	–
	1990 to 1999	58 106	A	2 347	C	4.0%
	2000 or later	59 418	A	2 563	B	4.3%
	2000 to 2004	29 316	A	1 451	C	4.9%
	2005 or later	30 102	A	–	F	–
Hours of operation	**All operating hours**	**482 266**	**A**	**23 519**	**A**	**4.9%**
	36 or less	48 333	A	–	F	–
	37 to 48	132 389	A	6 802	C	5.1%
	49 to 72	149 721	A	6 042	B	4.0%
	73 to 96	47 380	A	2 842	B	6.0%
	97 to 120	38 492	A	–	F	–
	121 to 168	65 951	A	–	F	–

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Other Fuels include all other fuels other than electricity, natural gas, distillates and propane.

** Other includes all other Canadian climate zones not listed.

*** Other includes all other commercial buildings. See Appendix C for more details.

Table 4.6 – Characteristics of buildings that primarily use electricity for space heating

Electricity use	Building characteristics	All buildings		Buildings that heat with electricity		Share
			Q.I.		Q.I.	
Climate zone	**All climate zones**	**482 266**	**A**	**131 659**	**A**	**27.3%**
	Atlantic	47 911	A	22 785	A	47.6%
	Great Lakes	233 880	A	60 011	A	25.7%
	Pacific Coast	38 092	A	17 462	B	45.8%
	Other*	162 383	A	31 401	A	19.3%
Primary activity	**All primary activities**	**482 266**	**A**	**131 659**	**A**	**27.3%**
	Office building (non-medical)	83 583	A	31 727	A	38.0%
	Medical office building	10 525	A	4 054	A	38.5%
	Elementary or secondary school	18 425	A	4 099	A	22.2%
	Nursing or residential care facility	6 482	A	1 972	A	30.4%
	Warehouse	32 879	A	4 703	A	14.3%
	Hotel or motel	9 963	C	–	F	–
	Hospital	752	A	86	B	11.5%
	Food or beverage store	40 403	A	14 916	A	36.9%
	Non-food retail store	56 750	A	14 824	B	26.1%
	Other**	222 505	A	49 422	A	22.2%
Building size	**All building sizes**	**482 266**	**A**	**131 659**	**A**	**27.3%**
	5000 square feet or less (465 m^2 or less)	236 539	A	80 080	A	33.9%
	5001 to 10 000 square feet (466 to 929 m^2)	91 680	A	17 507	A	19.1%
	10 001 to 50 000 square feet (930 to 4645 m^2)	123 565	A	25 794	A	20.9%
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	25 319	A	7 199	A	28.4%
	Over 200 000 square feet (Over 18 580 m^2)	5 162	A	1 080	C	20.9%

(Continued)

Table 4.6 – Characteristics of buildings that primarily use electricity for space heating (continued)

Electricity use	Building characteristics	All buildings		Buildings that heat with electricity		Share
			Q.I.		Q.I.	
Year of construction	**All years of construction**	**482 266**	**A**	**131 659**	**A**	**27.3%**
	Before 1920	46 951	A	7 993	C	17.0%
	1920 to 1959	83 521	A	18 950	A	22.7%
	1960 to 1969	67 758	A	14 323	B	21.1%
	1970 to 1979	75 107	A	23 540	A	31.3%
	1980 to 1989	91 404	A	29 887	A	32.7%
	1990 to 1999	58 106	A	21 043	B	36.2%
	2000 or later	59 418	A	15 921	A	26.8%
	2000 to 2004	29 316	A	7 024	A	24.0%
	2005 or later	30 102	A	8 897	B	29.6%
Hours of operation	**All operating hours**	**482 266**	**A**	**131 659**	**A**	**27.3%**
	36 or less	48 333	A	8 506	B	17.6%
	37 to 48	132 389	A	37 882	A	28.6%
	49 to 72	149 721	A	40 036	A	26.7%
	73 to 96	47 380	A	12 660	A	26.7%
	97 to 120	38 492	A	10 000	A	26.0%
	121 to 168	65 951	A	22 576	A	34.2%

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Other includes all other Canadian climate zones not listed.

** Other includes all other commercial buildings. See Appendix C for more details.

Table 4.7 – Characteristics of buildings that primarily use natural gas for space heating

Natural gas use	Building characteristics	All buildings		Buildings that heat with natural gas		Share
			Q.I.		Q.I.	
Climate zone	**All climate zones**	**482 266**	**A**	**260 550**	**A**	**54.0%**
	Atlantic	47 911	A	2 022	B	4.2%
	Great Lakes	233 880	A	124 132	A	53.1%
	Pacific Coast	38 092	A	17 320	A	45.5%
	Other*	162 383	A	117 075	A	72.1%
Primary activity	**All primary activities**	**482 266**	**A**	**260 550**	**A**	**54.0%**
	Office building (non-medical)	83 583	A	46 804	A	56.0%
	Medical office building	10 525	A	6 357	B	60.4%
	Elementary or secondary school	18 425	A	11 866	A	64.4%
	Nursing or residential care facility	6 482	A	3 959	A	61.1%
	Warehouse	32 879	A	24 792	B	75.4%
	Hotel or motel	9 963	C	2 548	B	25.6%
	Hospital	752	A	504	A	67.1%
	Food or beverage store	40 403	A	19 742	A	48.9%
	Non-food retail store	56 750	A	29 724	A	52.4%
	Other**	222 505	A	114 254	A	51.3%
Building size	**All building sizes**	**482 266**	**A**	**260 550**	**A**	**54.0%**
	5000 square feet or less (465 m^2 or less)	236 539	A	112 984	A	47.8%
	5001 to 10 000 square feet (466 to 929 m^2)	91 680	A	46 345	A	50.6%
	10 001 to 50 000 square feet (930 to 4645 m^2)	123 565	A	83 319	A	67.4%
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	25 319	A	14 768	A	58.3%
	Over 200 000 square feet (Over 18 580 m^2)	5 162	A	3 134	B	60.7%

(Continued)

Table 4.7 – Characteristics of buildings that primarily use natural gas for space heating (continued)

Natural gas use	Building characteristics	All buildings		Buildings that heat with natural gas		Share
			Q.I.		Q.I.	
Year of construction	**All years of construction**	**482 266**	**A**	**260 550**	**A**	**54.0%**
	Before 1920	46 951	A	24 871	B	53.0%
	1920 to 1959	83 521	A	44 864	A	53.7%
	1960 to 1969	67 758	A	40 674	A	60.0%
	1970 to 1979	75 107	A	42 636	A	56.8%
	1980 to 1989	91 404	A	46 766	A	51.2%
	1990 to 1999	58 106	A	22 997	A	39.6%
	2000 or later	59 418	A	37 743	A	63.5%
	2000 to 2004	29 316	A	19 283	B	65.8%
	2005 or later	30 102	A	18 460	B	61.3%
Hours of operation	**All operating hours**	**482 266**	**A**	**260 550**	**A**	**54.0%**
	36 or less	48 333	A	24 393	A	50.5%
	37 to 48	132 389	A	70 381	A	53.2%
	49 to 72	149 721	A	87 491	A	58.4%
	73 to 96	47 380	A	28 125	A	59.4%
	97 to 120	38 492	A	23 837	A	61.9%
	121 to 168	65 951	A	26 324	A	39.9%

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Other includes all other Canadian climate zones not listed.

** Other includes all other commercial buildings. See Appendix C for more details.

Table 4.8 – Characteristics of buildings that primarily use distillates* for space heating

Distillates use	Building characteristics	All buildings		Buildings that heat with distillates		Share
			Q.I.		Q.I.	
Climate zone	**All climate zones**	**482 266**	**A**	**49 903**	**A**	**10.3%**
	Atlantic	47 911	A	19 090	A	39.8%
	Great Lakes	233 880	A	24 881	B	10.6%
	Pacific Coast	38 092	A	–	F	–
	Other**	162 383	A	4 801	B	3.0%
Primary activity	**All primary activities**	**482 266**	**A**	**49 903**	**A**	**10.3%**
	Office building (non-medical)	83 583	A	4 253	B	5.1%
	Medical office building	10 525	A	–	F	–
	Elementary or secondary school	18 425	A	2 188	A	11.9%
	Nursing or residential care facility	6 482	A	512	C	7.9%
	Warehouse	32 879	A	–	F	–
	Hotel or motel	9 963	C	155	C	1.6%
	Hospital	752	A	118	B	15.8%
	Food or beverage store	40 403	A	–	F	–
	Non-food retail store	56 750	A	–	F	–
	Other***	222 505	A	30 317	B	13.6%
Building size	**All building sizes**	**482 266**	**A**	**49 903**	**A**	**10.3%**
	5000 square feet or less (465 m^2 or less)	236 539	A	25 729	A	10.9%
	5001 to 10 000 square feet (466 to 929 m^2)	91 680	A	13 892	B	15.2%
	10 001 to 50 000 square feet (930 to 4645 m^2)	123 565	A	9 158	B	7.4%
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	25 319	A	788	B	3.1%
	Over 200 000 square feet (Over 18 580 m^2)	5 162	A	–	F	–

(Continued)

Table 4.8 – Characteristics of buildings that primarily use distillates* for space heating (continued)

Distillates use	Building characteristics	All buildings	Q.I.	Buildings that heat with distillates	Q.I.	Share
Year of construction	**All years of construction**	**482 266**	**A**	**49 903**	**A**	**10.3%**
	Before 1920	46 951	A	11 047	C	23.5%
	1920 to 1959	83 521	A	14 707	C	17.6%
	1960 to 1969	67 758	A	8 378	B	12.4%
	1970 to 1979	75 107	A	5 825	B	7.8%
	1980 to 1989	91 404	A	–	F	–
	1990 to 1999	58 106	A	2 329	C	4.0%
	2000 or later	59 418	A	2 709	C	4.6%
	2000 to 2004	29 316	A	1 550	C	5.3%
	2005 or later	30 102	A	–	F	–
Hours of operation	**All operating hours**	**482 266**	**A**	**49 903**	**A**	**10.3%**
	36 or less	48 333	A	11 966	B	24.8%
	37 to 48	132 389	A	11 159	A	8.4%
	49 to 72	149 721	A	13 863	C	9.3%
	73 to 96	47 380	A	2 276	C	4.8%
	97 to 120	38 492	A	–	F	–
	121 to 168	65 951	A	7 457	C	11.3%

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Distillates include light fuel oil, diesel and kerosene.

** Other includes all other Canadian climate zones not listed.

*** Other includes all other commercial buildings. See Appendix C for more details.

Table 4.9 – Characteristics of buildings that have no space cooling

No space cooling	Building characteristics	All buildings		Buildings with no space cooling		Share
			Q.I.		Q.I.	
Climate zone	**All climate zones**	**482 266**	**A**	**150 583**	**A**	**31.2%**
	Atlantic	47 911	A	24 276	A	50.7%
	Great Lakes	233 880	A	58 669	A	25.1%
	Pacific Coast	38 092	A	15 914	B	41.8%
	Other*	162 383	A	51 725	A	31.9%
Primary activity	**All primary activities**	**482 266**	**A**	**150 583**	**A**	**31.2%**
	Office building (non-medical)	83 583	A	9 509	B	11.4%
	Medical office building	10 525	A	–	F	–
	Elementary or secondary school	18 425	A	6 681	A	36.3%
	Nursing or residential care facility	6 482	A	1 520	A	23.5%
	Warehouse	32 879	A	14 652	B	44.6%
	Hotel or motel	9 963	C	–	F	–
	Hospital	752	A	10	C	1.3%
	Food or beverage store	40 403	A	5 332	B	13.2%
	Non-food retail store	56 750	A	12 213	C	21.5%
	Other**	222 505	A	95 476	A	42.9%
Building size	**All building sizes**	**482 266**	**A**	**150 583**	**A**	**31.2%**
	5000 square feet or less (465 m^2 or less)	236 539	A	91 592	A	38.7%
	5001 to 10 000 square feet (466 to 929 m^2)	91 680	A	27 427	B	29.9%
	10 001 to 50 000 square feet (930 to 4645 m^2)	123 565	A	27 675	A	22.4%
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	25 319	A	3 449	B	13.6%
	Over 200 000 square feet (Over 18 580 m^2)	5 162	A	441	C	8.5%

(Continued)

Table 4.9 – Characteristics of buildings that have no space cooling (continued)

No space cooling	Building characteristics	All buildings		Buildings with no space cooling		Share
			Q.I.		Q.I.	
Year of construction	**All years of construction**	**482 266**	**A**	**150 583**	**A**	**31.2%**
	Before 1920	46 951	A	16 632	B	35.4%
	1920 to 1959	83 521	A	30 640	A	36.7%
	1960 to 1969	67 758	A	22 391	A	33.0%
	1970 to 1979	75 107	A	27 014	A	36.0%
	1980 to 1989	91 404	A	23 478	A	25.7%
	1990 to 1999	58 106	A	–	F	–
	2000 or later	59 418	A	11 885	B	20.0%
	2000 to 2004	29 316	A	6 925	B	23.6%
	2005 or later	30 102	A	–	F	–
Hours of operation	**All operating hours**	**482 266**	**A**	**150 583**	**A**	**31.2%**
	36 or less	48 333	A	29 930	A	61.9%
	37 to 48	132 389	A	48 027	A	36.3%
	49 to 72	149 721	A	33 192	A	22.2%
	73 to 96	47 380	A	6 816	A	14.4%
	97 to 120	38 492	A	5 503	B	14.3%
	121 to 168	65 951	A	27 116	B	41.1%

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Other includes all other Canadian climate zones not listed.

** Other includes all other commercial buildings. See Appendix C for more details.

Table 4.10 – Characteristics of buildings that primarily use electricity for space cooling

Electricity use	Building characteristics	All buildings		Buildings that cool with electricity		Share
			Q.I.		Q.I.	
Climate zone	**All climate zones**	**482 266**	**A**	**290 565**	**A**	**60.3%**
	Atlantic	47 911	A	22 414	A	46.8%
	Great Lakes	233 880	A	156 039	A	66.7%
	Pacific Coast	38 092	A	18 802	A	49.4%
	Other*	162 383	A	93 311	A	57.5%
Primary activity	**All primary activities**	**482 266**	**A**	**290 565**	**A**	**60.3%**
	Office building (non-medical)	83 583	A	65 288	A	78.1%
	Medical office building	10 525	A	8 876	A	84.3%
	Elementary or secondary school	18 425	A	10 898	A	59.1%
	Nursing or residential care facility	6 482	A	4 174	A	64.4%
	Warehouse	32 879	A	16 746	B	50.9%
	Hotel or motel	9 963	C	4 714	A	47.3%
	Hospital	752	A	702	A	93.4%
	Food or beverage store	40 403	A	31 970	A	79.1%
	Non-food retail store	56 750	A	35 690	A	62.9%
	Other**	222 505	A	111 509	A	50.1%
Building size	**All building sizes**	**482 266**	**A**	**290 565**	**A**	**60.3%**
	5000 square feet or less (465 m^2 or less)	236 539	A	126 946	A	53.7%
	5001 to 10 000 square feet (466 to 929 m^2)	91 680	A	60 076	A	65.5%
	10 001 to 50 000 square feet (930 to 4645 m^2)	123 565	A	80 110	A	64.8%
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	25 319	A	19 019	A	75.1%
	Over 200 000 square feet (Over 18 580 m^2)	5 162	A	4 413	A	85.5%

(Continued)

Table 4.10 – Characteristics of buildings that primarily use electricity for space cooling (continued)

Electricity use	Building characteristics	All buildings		Buildings that cool with electricity		Share
			Q.I.		Q.I.	
Year of construction	**All years of construction**	**482 266**	**A**	**290 565**	**A**	**60.3%**
	Before 1920	46 951	A	25 716	B	54.8%
	1920 to 1959	83 521	A	45 560	A	54.5%
	1960 to 1969	67 758	A	37 888	A	55.9%
	1970 to 1979	75 107	A	43 693	A	58.2%
	1980 to 1989	91 404	A	58 422	A	63.9%
	1990 to 1999	58 106	A	36 951	A	63.6%
	2000 or later	59 418	A	42 334	A	71.2%
	2000 to 2004	29 316	A	20 256	A	69.1%
	2005 or later	30 102	A	22 078	B	73.3%
Hours of operation	**All operating hours**	**482 266**	**A**	**290 565**	**A**	**60.3%**
	36 or less	48 333	A	16 549	B	34.2%
	37 to 48	132 389	A	72 311	A	54.6%
	49 to 72	149 721	A	105 919	A	70.7%
	73 to 96	47 380	A	30 736	A	64.9%
	97 to 120	38 492	A	30 343	A	78.8%
	121 to 168	65 951	A	34 709	A	52.6%

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Other includes all other Canadian climate zones not listed.

** Other includes all other commercial buildings. See Appendix C for more details.

Table 4.11 – Characteristics of buildings that primarily use natural gas for space cooling

Natural gas use	Building characteristics	All buildings		Buildings that cool with natural gas		Share
			Q.I.		Q.I.	
Climate zone	**All climate zones**	**482 266**	**A**	**35 089**	**A**	**7.3%**
	Atlantic	47 911	A	–	F	–
	Great Lakes	233 880	A	16 611	B	7.1%
	Pacific Coast	38 092	A	–	F	–
	Other*	162 383	A	15 013	B	9.2%
Primary activity	**All primary activities**	**482 266**	**A**	**35 089**	**A**	**7.3%**
	Office building (non-medical)	83 583	A	–	F	–
	Medical office building	10 525	A	–	F	–
	Elementary or secondary school	18 425	A	–	F	–
	Nursing or residential care facility	6 482	A	627	C	9.7%
	Warehouse	32 879	A	–	F	–
	Hotel or motel	9 963	C	–	F	–
	Hospital	752	A	–	F	–
	Food or beverage store	40 403	A	–	F	–
	Non-food retail store	56 750	A	8 555	C	15.1%
	Other**	222 505	A	12 848	B	5.8%
Building size	**All building sizes**	**482 266**	**A**	**35 089**	**A**	**7.3%**
	5000 square feet or less (465 m^2 or less)	236 539	A	14 472	C	6.1%
	5001 to 10 000 square feet (466 to 929 m^2)	91 680	A	–	F	–
	10 001 to 50 000 square feet (930 to 4645 m^2)	123 565	A	14 896	B	12.1%
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	25 319	A	–	F	–
	Over 200 000 square feet (Over 18 580 m^2)	5 162	A	–	F	–

(Continued)

Table 4.11 – Characteristics of buildings that primarily use natural gas for space cooling (continued)

Natural gas use	Building characteristics	All buildings		Buildings that cool with natural gas		Share
			Q.I.		Q.I.	
Year of construction	**All years of construction**	**482 266**	**A**	**35 089**	**A**	**7.3%**
	Before 1920	46 951	A	–	F	–
	1920 to 1959	83 521	A	–	F	–
	1960 to 1969	67 758	A	–	F	–
	1970 to 1979	75 107	A	3 709	B	4.9%
	1980 to 1989	91 404	A	–	F	–
	1990 to 1999	58 106	A	–	F	–
	2000 or later	59 418	A	4 595	C	7.7%
	2000 to 2004	29 316	A	–	F	–
	2005 or later	30 102	A	–	F	–
Hours of operation	**All operating hours**	**482 266**	**A**	**35 089**	**A**	**7.3%**
	36 or less	48 333	A	–	F	–
	37 to 48	132 389	A	10 293	C	7.8%
	49 to 72	149 721	A	9 820	C	6.6%
	73 to 96	47 380	A	–	F	–
	97 to 120	38 492	A	–	F	–
	121 to 168	65 951	A	3 532	C	5.4%

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, ! and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Other includes all other Canadian climate zones not listed.

** Other includes all other commercial buildings. See Appendix C for more details.

Table 4.12 – Characteristics of buildings that have no water heating

No water heating	Building characteristics	All buildings		Buildings that have no water heating		Share
			Q.I.		Q.I.	
Climate zone	**All climate zones**	**482 266**	**A**	**53 525**	**A**	**11.1%**
	Atlantic	47 911	A	4 491	B	9.4%
	Great Lakes	233 880	A	28 574	B	12.2%
	Pacific Coast	38 092	A	4 406	B	11.6%
	Other*	162 383	A	16 053	B	9.9%
Primary activity	**All primary activities**	**482 266**	**A**	**53 525**	**A**	**11.1%**
	Office building (non-medical)	83 583	A	2 905	C	3.5%
	Medical office building	10 525	A	–	F	–
	Elementary or secondary school	18 425	A	300	C	1.6%
	Nursing or residential care facility	6 482	A	X	X	X
	Warehouse	32 879	A	9 606	C	29.2%
	Hotel or motel	9 963	C	–	F	–
	Hospital	752	A	X	X	X
	Food or beverage store	40 403	A	–	F	–
	Non-food retail store	56 750	A	–	F	–
	Other**	222 505	A	35 022	A	15.7%
Building size	**All building sizes**	**482 266**	**A**	**53 525**	**A**	**11.1%**
	5000 square feet or less (465 m^2 or less)	236 539	A	33 802	A	14.3%
	5001 to 10 000 square feet (466 to 929 m^2)	91 680	A	–	F	–
	10 001 to 50 000 square feet (930 to 4645 m^2)	123 565	A	4 556	B	3.7%
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	25 319	A	–	F	–
	Over 200 000 square feet (Over 18 580 m^2)	5 162	A	–	F	–

(Continued)

Table 4.12 – Characteristics of buildings that have no water heating (continued)

No water heating	Building characteristics	All buildings		Buildings that have no water heating		Share
			Q.I.		Q.I.	
Year of construction	**All years of construction**	**482 266**	**A**	**53 525**	**A**	**11.1%**
	Before 1920	46 951	A	5 445	C	11.6%
	1920 to 1959	83 521	A	7 807	C	9.3%
	1960 to 1969	67 758	A	–	F	–
	1970 to 1979	75 107	A	7 175	B	9.6%
	1980 to 1989	91 404	A	12 167	C	13.3%
	1990 to 1999	58 106	A	–	F	–
	2000 or later	59 418	A	4 689	C	7.9%
	2000 to 2004	29 316	A	–	F	–
	2005 or later	30 102	A	–	F	–
Hours of operation	**All operating hours**	**482 266**	**A**	**53 525**	**A**	**11.1%**
	36 or less	48 333	A	10 522	B	21.8%
	37 to 48	132 389	A	21 423	B	16.2%
	49 to 72	149 721	A	11 275	B	7.5%
	73 to 96	47 380	A	–	F	–
	97 to 120	38 492	A	1 384	C	3.6%
	121 to 168	65 951	A	7 093	C	10.8%

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Other includes all other Canadian climate zones not listed.

** Other includes all other commercial buildings. See Appendix C for more details.

Table 4.13 – Characteristics of buildings that primarily use electricity for water heating

Electricity use	Building characteristics	All buildings		Buildings that heat water with electricity		Share
			Q.I.		Q.I.	
Climate zone	**All climate zones**	**482 266**	**A**	**222 932**	**A**	**46.2%**
	Atlantic	47 911	A	31 004	A	64.7%
	Great Lakes	233 880	A	115 693	A	49.5%
	Pacific Coast	38 092	A	18 417	B	48.3%
	Other*	162 383	A	57 819	A	35.6%
Primary activity	**All primary activities**	**482 266**	**A**	**222 932**	**A**	**46.2%**
	Office building (non-medical)	83 583	A	46 194	A	55.3%
	Medical office building	10 525	A	5 387	A	51.2%
	Elementary or secondary school	18 425	A	8 556	A	46.4%
	Nursing or residential care facility	6 482	A	1 968	A	30.4%
	Warehouse	32 879	A	9 523	B	29.0%
	Hotel or motel	9 963	C	–	F	–
	Hospital	752	A	104	B	13.8%
	Food or beverage store	40 403	A	20 279	A	50.2%
	Non-food retail store	56 750	A	30 842	A	54.3%
	Other**	222 505	A	95 817	A	43.1%
Building size	**All building sizes**	**482 266**	**A**	**222 932**	**A**	**46.2%**
	5000 square feet or less (465 m^2 or less)	236 539	A	119 328	A	50.4%
	5001 to 10 000 square feet (466 to 929 m^2)	91 680	A	43 241	A	47.2%
	10 001 to 50 000 square feet (930 to 4645 m^2)	123 565	A	51 109	A	41.4%
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	25 319	A	7 844	A	31.0%
	Over 200 000 square feet (Over 18 580 m^2)	5 162	A	1 411	B	27.3%

(Continued)

Table 4.13 – Characteristics of buildings that primarily use electricity for water heating (continued)

Electricity use	Building characteristics	All buildings		Buildings that heat water with electricity		Share
			Q.I.		Q.I.	
Year of construction	**All years of construction**	**482 266**	**A**	**222 932**	**A**	**46.2%**
	Before 1920	46 951	A	23 700	B	50.5%
	1920 to 1959	83 521	A	40 800	A	48.8%
	1960 to 1969	67 758	A	31 907	A	47.1%
	1970 to 1979	75 107	A	32 384	A	43.1%
	1980 to 1989	91 404	A	44 384	A	48.6%
	1990 to 1999	58 106	A	25 610	B	44.1%
	2000 or later	59 418	A	24 148	A	40.6%
	2000 to 2004	29 316	A	10 753	A	36.7%
	2005 or later	30 102	A	13 394	B	44.5%
Hours of operation	**All operating hours**	**482 266**	**A**	**222 932**	**A**	**46.2%**
	36 or less	48 333	A	21 823	B	45.2%
	37 to 48	132 389	A	55 485	A	41.9%
	49 to 72	149 721	A	79 352	A	53.0%
	73 to 96	47 380	A	21 535	A	45.5%
	97 to 120	38 492	A	17 102	A	44.4%
	121 to 168	65 951	A	27 635	A	41.9%

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Other includes all other Canadian climate zones not listed.

** Other includes all other commercial buildings. See Appendix C for more details.

Table 4.14 – Characteristics of buildings that primarily use natural gas for water heating

Natural gas use	Building characteristics	All buildings		Buildings that heat water with natural gas		Share
			Q.I.		Q.I.	
Climate zone	**All climate zones**	**482 266**	**A**	**180 938**	**A**	**37.5%**
	Atlantic	47 911	A	–	F	–
	Great Lakes	233 880	A	81 716	A	34.9%
	Pacific Coast	38 092	A	14 686	A	38.6%
	Other*	162 383	A	83 729	A	51.6%
Primary activity	**All primary activities**	**482 266**	**A**	**180 938**	**A**	**37.5%**
	Office building (non-medical)	83 583	A	30 428	A	36.4%
	Medical office building	10 525	A	4 397	C	41.8%
	Elementary or secondary school	18 425	A	8 297	A	45.0%
	Nursing or residential care facility	6 482	A	4 049	A	62.5%
	Warehouse	32 879	A	13 224	B	40.2%
	Hotel or motel	9 963	C	3 427	B	34.4%
	Hospital	752	A	490	A	65.2%
	Food or beverage store	40 403	A	16 808	A	41.6%
	Non-food retail store	56 750	A	21 892	B	38.6%
	Other**	222 505	A	77 926	A	35.0%
Building size	**All building sizes**	**482 266**	**A**	**180 938**	**A**	**37.5%**
	5000 square feet or less (465 m^2 or less)	236 539	A	71 306	A	30.1%
	5001 to 10 000 square feet (466 to 929 m^2)	91 680	A	29 991	A	32.7%
	10 001 to 50 000 square feet (930 to 4645 m^2)	123 565	A	62 634	A	50.7%
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	25 319	A	14 226	A	56.2%
	Over 200 000 square feet (Over 18 580 m^2)	5 162	A	2 782	B	53.9%

(Continued)

Table 4.14 – Characteristics of buildings that primarily use natural gas for water heating (continued)

Natural gas use	Building characteristics	All buildings		Buildings that heat water with natural gas		Share
			Q.I.		Q.I.	
Year of construction	**All years of construction**	**482 266**	**A**	**180 938**	**A**	**37.5%**
	Before 1920	46 951	A	13 419	B	28.6%
	1920 to 1959	83 521	A	29 757	A	35.6%
	1960 to 1969	67 758	A	26 199	A	38.7%
	1970 to 1979	75 107	A	32 173	A	42.8%
	1980 to 1989	91 404	A	32 167	A	35.2%
	1990 to 1999	58 106	A	18 691	A	32.2%
	2000 or later	59 418	A	28 533	A	48.0%
	2000 to 2004	29 316	A	14 329	B	48.9%
	2005 or later	30 102	A	14 204	B	47.2%
Hours of operation	**All operating hours**	**482 266**	**A**	**180 938**	**A**	**37.5%**
	36 or less	48 333	A	13 811	A	28.6%
	37 to 48	132 389	A	49 051	A	37.1%
	49 to 72	149 721	A	53 921	A	36.0%
	73 to 96	47 380	A	21 403	B	45.2%
	97 to 120	38 492	A	17 518	B	45.5%
	121 to 168	65 951	A	25 235	A	38.3%

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Other includes all other Canadian climate zones not listed.

** Other includes all other commercial buildings. See Appendix C for more details.

Table 4.15 – Characteristics of buildings that primarily use distillates* for water heating

Distillates use	Building characteristics	All buildings		Buildings that heat water with distillates		Share
			Q.I.		Q.I.	
Climate zone	**All climate zones**	**482 266**	**A**	**17 215**	**A**	**3.6%**
	Atlantic	47 911	A	9 126	A	19.0%
	Great Lakes	233 880	A	–	F	–
	Pacific Coast	38 092	A	–	F	–
	Other**	162 383	A	2 530	C	1.6%
Primary activity	**All primary activities**	**482 266**	**A**	**17 215**	**A**	**3.6%**
	Office building (non-medical)	83 583	A	2 978	C	3.6%
	Medical office building	10 525	A	X	X	X
	Elementary or secondary school	18 425	A	1 167	B	6.3%
	Nursing or residential care facility	6 482	A	334	C	5.2%
	Warehouse	32 879	A	X	X	X
	Hotel or motel	9 963	C	528	B	5.3%
	Hospital	752	A	106	C	14.1%
	Food or beverage store	40 403	A	–	F	–
	Non-food retail store	56 750	A	–	F	–
	Other***	222 505	A	9 292	B	4.2%
Building size	**All building sizes**	**482 266**	**A**	**17 215**	**A**	**3.6%**
	5000 square feet or less (465 m^2 or less)	236 539	A	8 956	B	3.8%
	5001 to 10 000 square feet (466 to 929 m^2)	91 680	A	–	F	–
	10 001 to 50 000 square feet (930 to 4645 m^2)	123 565	A	3 434	C	2.8%
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	25 319	A	632	C	2.5%
	Over 200 000 square feet (Over 18 580 m^2)	5 162	A	–	F	–

(Continued)

Table 4.15 – Characteristics of buildings that primarily use distillates* for water heating (continued)

Distillates use	Building characteristics	All buildings		Buildings that heat water with distillates		Share
			Q.I.		Q.I.	
Year of construction	**All years of construction**	**482 266**	**A**	**17 215**	**A**	**3.6%**
	Before 1920	46 951	A	–	F	–
	1920 to 1959	83 521	A	3 036	A	3.6%
	1960 to 1969	67 758	A	–	F	–
	1970 to 1979	75 107	A	2 254	B	3.0%
	1980 to 1989	91 404	A	1 888	C	2.1%
	1990 to 1999	58 106	A	–	F	–
	2000 or later	59 418	A	1 150	C	1.9%
	2000 to 2004	29 316	A	–	F	–
	2005 or later	30 102	A	–	F	–
Hours of operation	**All operating hours**	**482 266**	**A**	**17 215**	**A**	**3.6%**
	36 or less	48 333	A	–	F	–
	37 to 48	132 389	A	4 323	B	3.3%
	49 to 72	149 721	A	–	F	–
	73 to 96	47 380	A	–	F	–
	97 to 120	38 492	A	–	F	–
	121 to 168	65 951	A	3 772	B	5.7%

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Distillates include light fuel oil, diesel and kerosene.

** Other includes all other Canadian climate zones not listed.

*** Other includes all other commercial buildings. See Appendix C for more details.

5 ENERGY EFFICIENCY FEATURES

Table 5.1 – Characteristics of buildings with energy efficiency features*

Any energy efficiency feature	Building characteristics	All buildings		Buildings with any energy efficiency feature		Share
			Q.I.		Q.I.	
Primary activity	**All primary activities**	**482 266**	**A**	**266 278**	**A**	**55.2%**
	Office building (non-medical)	83 583	A	46 352	A	55.5%
	Medical office building	10 525	A	5 048	B	48.0%
	Elementary or secondary school	18 425	A	15 040	A	81.6%
	Nursing or residential care facility	6 482	A	3 502	A	54.0%
	Warehouse	32 879	A	11 512	C	35.0%
	Hotel or motel	9 963	C	–	F	–
	Hospital	752	A	623	A	82.9%
	Food or beverage store	40 403	A	21 569	A	53.4%
	Non-food retail store	56 750	A	21 058	B	37.1%
	Other**	222 505	A	87 673	A	39.4%
Building size	**All building sizes**	**482 266**	**A**	**266 278**	**A**	**55.2%**
	5000 square feet or less (465 m^2 or less)	236 539	A	85 699	A	36.2%
	5001 to 10 000 square feet (466 to 929 m^2)	91 680	A	39 421	A	43.0%
	10 001 to 50 000 square feet (930 to 4645 m^2)	123 565	A	67 390	A	54.5%
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	25 319	A	19 061	A	75.3%
	Over 200 000 square feet (Over 18 580 m^2)	5 162	A	4 417	A	85.6%
Year of construction	**All years of construction**	**482 266**	**A**	**266 278**	**A**	**55.2%**
	Before 1920	46 951	A	18 216	B	38.8%
	1920 to 1959	83 521	A	36 253	A	43.4%
	1960 to 1969	67 758	A	34 808	A	51.4%
	1970 to 1979	75 107	A	30 401	A	40.5%
	1980 to 1989	91 404	A	38 522	A	42.1%
	1990 to 1999	58 106	A	25 170	A	43.3%
	2000 or later	59 418	A	32 616	A	54.9%
	2000 to 2004	29 316	A	15 377	B	52.5%
	2005 or later	30 102	A	17 239	B	57.3%
Hours of operation	**All operating hours**	**482 266**	**A**	**266 278**	**A**	**55.2%**
	36 or less	48 333	A	17 861	B	37.0%
	37 to 48	132 389	A	56 297	A	42.5%
	49 to 72	149 721	A	63 379	A	42.3%
	73 to 96	47 380	A	26 932	A	56.8%
	97 to 120	38 492	A	21 929	A	57.0%
	121 to 168	65 951	A	29 590	A	44.9%

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Energy conservation awareness program, energy management control systems for heating, ventilating and cooling and/or lighting.

** Other includes all other commercial buildings. See Appendix C for more details.

Table 5.2 – Characteristics of buildings with energy conservation awareness programs

Energy conservation awareness program	Building characteristics	All buildings		Buildings with energy conservation awareness programs		
			Q.I.		Q.I.	Share
Primary activity	**All primary activities**	**482 266**	**A**	**110 590**	**A**	**22.9%**
	Office building (non-medical)	83 583	A	19 551	A	23.4%
	Medical office building	10 525	A	2 001	C	19.0%
	Elementary or secondary school	18 425	A	11 006	A	59.7%
	Nursing or residential care facility	6 482	A	2 153	B	33.2%
	Warehouse	32 879	A	–	F	–
	Hotel or motel	9 963	C	–	F	–
	Hospital	752	A	343	A	45.7%
	Food or beverage store	40 403	A	11 536	B	28.6%
	Non-food retail store	56 750	A	–	F	–
	Other*	222 505	A	52 002	A	23.4%
Building size	**All building sizes**	**482 266**	**A**	**110 590**	**A**	**22.9%**
	5000 square feet or less (465 m^2 or less)	236 539	A	41 164	A	17.4%
	5001 to 10 000 square feet (466 to 929 m^2)	91 680	A	20 785	B	22.7%
	10 001 to 50 000 square feet (930 to 4645 m^2)	123 565	A	32 934	A	26.7%
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	25 319	A	12 205	A	48.2%
	Over 200 000 square feet (Over 18 580 m^2)	5 162	A	3 501	A	67.8%
Year of construction	**All years of construction**	**482 266**	**A**	**110 590**	**A**	**22.9%**
	Before 1920	46 951	A	8 924	B	19.0%
	1920 to 1959	83 521	A	23 961	B	28.7%
	1960 to 1969	67 758	A	16 658	A	24.6%
	1970 to 1979	75 107	A	13 478	B	17.9%
	1980 to 1989	91 404	A	16 702	B	18.3%
	1990 to 1999	58 106	A	14 093	B	24.3%
	2000 or later	59 418	A	16 774	B	28.2%
	2000 to 2004	29 316	A	7 901	C	27.0%
	2005 or later	30 102	A	8 873	C	29.5%
Hours of operation	**All operating hours**	**482 266**	**A**	**110 590**	**A**	**22.9%**
	36 or less	48 333	A	11 504	B	23.8%
	37 to 48	132 389	A	32 024	A	24.2%
	49 to 72	149 721	A	25 251	A	16.9%
	73 to 96	47 380	A	15 548	B	32.8%
	97 to 120	38 492	A	9 402	B	24.4%
	121 to 168	65 951	A	16 860	B	25.6%

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Other includes all other commercial buildings. See Appendix C for more details.

Table 5.3 – Characteristics of buildings with energy management control systems for HVAC

Energy management control system for heating, ventilating and air conditioning (HVAC)	Building characteristics	All buildings		Buildings with HVAC controls		Share
			Q.I.		Q.I.	
Primary activity	**All primary activities**	**482 266**	**A**	**157 410**	**A**	**32.6%**
	Office building (non-medical)	83 583	A	37 598	A	45.0%
	Medical office building	10 525	A	3 293	B	31.3%
	Elementary or secondary school	18 425	A	13 388	A	72.7%
	Nursing or residential care facility	6 482	A	2 144	A	33.1%
	Warehouse	32 879	A	7 248	C	22.0%
	Hotel or motel	9 963	C	–	F	–
	Hospital	752	A	559	A	74.4%
	Food or beverage store	40 403	A	14 579	A	36.1%
	Non-food retail store	56 750	A	19 249	B	33.9%
	Other*	222 505	A	57 646	A	25.9%
Building size	**All building sizes**	**482 266**	**A**	**157 410**	**A**	**32.6%**
	5000 square feet or less (465 m^2 or less)	236 539	A	59 501	A	25.2%
	5001 to 10 000 square feet (466 to 929 m^2)	91 680	A	24 797	A	27.0%
	10 001 to 50 000 square feet (930 to 4645 m^2)	123 565	A	52 996	A	42.9%
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	25 319	A	16 433	A	64.9%
	Over 200 000 square feet (Over 18 580 m^2)	5 162	A	3 684	A	71.4%
Year of construction	**All years of construction**	**482 266**	**A**	**157 410**	**A**	**32.6%**
	Before 1920	46 951	A	13 281	B	28.3%
	1920 to 1959	83 521	A	24 642	A	29.5%
	1960 to 1969	67 758	A	28 479	A	42.0%
	1970 to 1979	75 107	A	18 257	A	24.3%
	1980 to 1989	91 404	A	23 794	A	26.0%
	1990 to 1999	58 106	A	19 720	A	33.9%
	2000 or later	59 418	A	29 237	A	49.2%
	2000 to 2004	29 316	A	13 205	B	45.0%
	2005 or later	30 102	A	16 032	B	53.3%
Hours of operation	**All operating hours**	**482 266**	**A**	**157 410**	**A**	**32.6%**
	36 or less	48 333	A	12 854	B	26.6%
	37 to 48	132 389	A	35 980	A	27.2%
	49 to 72	149 721	A	52 700	A	35.2%
	73 to 96	47 380	A	22 176	B	46.8%
	97 to 120	38 492	A	16 739	B	43.5%
	121 to 168	65 951	A	16 962	A	25.7%

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Other includes all other commercial buildings. See Appendix C for more details.

Table 5.4 – Characteristics of buildings with energy management control systems for lighting

All three energy efficiency features	Building characteristics	All buildings		Buildings with lighting controls		Share
			Q.I.		Q.I.	
Primary activity	**All primary activities**	**482 266**	**A**	**79 533**	**A**	**16.5%**
	Office building (non-medical)	83 583	A	15 216	B	18.2%
	Medical office building	10 525	A	–	F	–
	Elementary or secondary school	18 425	A	6 347	A	34.4%
	Nursing or residential care facility	6 482	A	1 054	B	16.3%
	Warehouse	32 879	A	–	F	–
	Hotel or motel	9 963	C	1 765	C	17.7%
	Hospital	752	A	217	A	28.9%
	Food or beverage store	40 403	A	7 646	B	18.9%
	Non-food retail store	56 750	A	12 279	C	21.6%
	Other*	222 505	A	27 069	A	12.2%
Building size	**All building sizes**	**482 266**	**A**	**79 533**	**A**	**16.5%**
	5000 square feet or less (465 m^2 or less)	236 539	A	30 861	B	13.0%
	5001 to 10 000 square feet (466 to 929 m^2)	91 680	A	9 860	B	10.8%
	10 001 to 50 000 square feet (930 to 4645 m^2)	123 565	A	27 521	A	22.3%
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	25 319	A	8 519	A	33.6%
	Over 200 000 square feet (Over 18 580 m^2)	5 162	A	2 772	B	53.7%
Year of construction	**All years of construction**	**482 266**	**A**	**79 533**	**A**	**16.5%**
	Before 1920	46 951	A	–	F	–
	1920 to 1959	83 521	A	9 491	C	11.4%
	1960 to 1969	67 758	A	10 322	B	15.2%
	1970 to 1979	75 107	A	13 456	B	17.9%
	1980 to 1989	91 404	A	11 464	B	12.5%
	1990 to 1999	58 106	A	10 058	A	17.3%
	2000 or later	59 418	A	18 596	B	31.3%
	2000 to 2004	29 316	A	9 752	C	33.3%
	2005 or later	30 102	A	8 844	C	29.4%
Hours of operation	**All operating hours**	**482 266**	**A**	**79 533**	**A**	**16.5%**
	36 or less	48 333	A	–	F	–
	37 to 48	132 389	A	14 618	B	11.0%
	49 to 72	149 721	A	25 859	A	17.3%
	73 to 96	47 380	A	9 366	C	19.8%
	97 to 120	38 492	A	11 511	B	29.9%
	121 to 168	65 951	A	10 640	A	16.1%

Due to rounding, numbers may not add up to the total shown, and some numbers may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Other includes all other commercial buildings. See Appendix C for more details.

APPENDIX A
METHODOLOGY

Introduction

The Survey on Commercial and Institutional Energy Use (SCIEU) was first conducted for reference year 2009. It amalgamated components of two previous surveys, the annual Commercial and Institutional Consumption of Energy Survey (CICES) and the Commercial and Industrial Building Energy Survey (CIBEUS).

The SCIEU was developed to meet the data needs of Natural Resources Canada (NRCan) and Environment Canada (EC) to support the following initiatives:

- monitoring energy consumption trends in the commercial and institutional (C&I) sector (NRCan)
- monitoring greenhouse gas trends in the C&I sector (EC)
- developing a model to allocate energy consumption and greenhouse gases at the building level and its final uses, such as heating, cooling and water heating (NRCan and EC)
- CICES had been conducted annually via mail-out/mail-back questionnaires to monitor energy consumption trends in the C&I sector at the establishment level

CIBEUS was carried out for the reference year 2000 and collected building-level information on energy use and building characteristics that affect energy consumption. CIBEUS was designed as a two-stage survey, where the first phase sampled enumeration areas, within which all C&I buildings were listed. In the second stage, a sample was selected from the listed buildings. Data for selected buildings were then collected by personal interview. The scope of this survey was limited to major cities.

For reference year 2009, information was required at both the establishment and building level. To collect this data, an integrated survey was designed that would collect data at both levels by using a co-ordinated approach for sampling and data collection.

Overview of the integrated survey

The SCIEU integrated the building- and establishment-level components throughout the survey process. This was done primarily to take advantage of the direct relationships between establishments and buildings, which allowed us to realize both a cost savings and a reduction in response burden, avoiding having respondents receive and complete two similar questionnaires.

For approximately 50 percent of the establishments in the target population, the establishment and the building were equivalent entities because the establishment completely occupied one building but only one building. For the remaining establishments, the relationships were more complex because buildings could house multiple establishments and an establishment could occupy multiple buildings (either completely or partially).

It is also important to note that a list of C&I buildings in Canada that could serve as a survey frame was not available. Several administrative lists and databases available from private sector firms were considered. But none were of sufficient quality in all of the following aspects: complete coverage, reliable and documented updating procedures, and contact information for an appropriate respondent for this survey.

For this reason, a method that did not require a list frame was needed, such as area sampling or indirect sampling. Previous methods were not viable options because the target population had expanded to include rural areas, the timelines were compressed, and significant resources were already required for data collection. Consequently, an indirect sampling approach that extended from the sample of establishments was developed to obtain a representative sample of buildings.

Satisfaction by industry

Frame industry number	Industry	NAICS	Population
1	Wholesale Trade	41	61 279
2	Postal Service (491), Couriers and Messengers (492), Warehousing and Storage (493)	49	5 260
3	Retail Trade	44 (except 445) and 45	106 354
4	Food and Beverage Industries	445	23 896
5	Information and Cultural Industries	51	13 369
6	Finance and Insurance, Real Estate and Rental Leasing; Professional, Scientific and Technical Services, Management of Companies and Enterprises, Administrative and Support, Waste Management and Remediation Services	52, 53, 54, 55 and 56	265 106
7	Ambulatory Health Care Services	621	64 083
8	Nursing and Residential Care Facilities	623	10 553
9	Social Assistance	624	17 627
10	Arts, Entertainment and Recreation	71	17 059
11	Accommodation Services	721	10 498
12	Food Services and Drinking Places	722	63 354
13	Transportation and Other Services (Except Public Administration)	48 and 81 (except 813110)	160 582
14	Public Administration	91	7 379
15	Colleges and CÉGEPs, Business Schools and Computer and Management Training, Technical and Trade Schools, Other Schools, Educational Support Services	6112, 6114, 6115, 6116, 6117	9 949
16	Universities	6113	198
17	Hospitals	622[2]	702
18	Primary and Secondary Schools	6111[3]	16 222
19	Religious Organizations	813110	14 201

[2] frame from the Health Statistics Division of Statistics Canada

[3] frame from Tourism and the Centre for Education Statistics of Statistics Canada

Stratification by region

Region	Province	Population
Atlantic	New Brunswick, Nova Scotia, Prince Edward Island, Newfoundland and Labrador	59 509
Quebec	Quebec	186 451
Ontario	Ontario	315 327
Prairie	Manitoba, Saskatchewan, Alberta	170 661
British Columbia	British Columbia	135 723

Stratification by climate zone

Climate zone	Description
Atlantic	New Brunswick, Nova Scotia, Prince Edward Island, Newfoundland and Labrador
Great Lakes	a corridor in Ontario and Quebec that runs approximately from Windsor to Québec
Pacific Coast	mostly western British Columbia and Vancouver Island
Other	provincial areas not in the other three climate zones

Collection outcomes (establishments)

Total sample	7 141
Non-response to pre-contact	1 998
Non-response to personal interview	390
Out-of scope (pre-contact or personal interview)	936
Completed personal interview[4]	3 276
Unusable personal interview[5]	541

Building collection outcomes

Total sample	5 704
Non-response to pre-contact	n/a
Non-response to personal interview	575
Out-of scope (pre-contact or personal interview)	177
Completed personal interview[6]	4 613
Unusable personal interview[7]	339

Comparisons with CICES 2008

SCIEU was not designed as a longitudinal survey that could be compared with previous surveys. At the request of NRCan, the SCIEU sample was selected to yield controlled overlap with the 2008 CICES sample of establishments. A target of 50 percent overlap was specified at the stratum level in the sampling program, and an overlap rate of 36 percent was achieved because of stratification constraints and a lack of identifiers to identify individual establishments in multiple years in several industries. This overlap was intended to evaluate the impact of changing collection modes from 2008.

The response level was low in both the 2008 CICES and the 2009 SCIEU surveys. Consequently, the number of responding units in common was low and insufficient for accurate year-to-year comparisons. Several methodological changes were introduced for the 2009 survey, including those summarized. The changes affect comparability of the results with previous surveys. The changes make it difficult to draw conclusions on real changes in the population of establishments by using comparisons of SCIEU 2009 establishment-based estimates and CICES 2008 establishment-based estimates.

[4] includes responses derived from worksheets without a personal interview

[5] includes responses with severe edit failures, as well as those that did not authorize Statistics Canada to share their data with Natural Resources Canada

[6] includes responses derived from worksheets without a personal interview

[7] includes records with severe edit failures, as well as those that did not authorize Statistics Canada to share their data with Natural Resources Canada

Factors that affect comparability

- **changes to the definition of the target population** – The target population for SCIEU included three industries that were not previously surveyed: NAICS codes 48, 55 and 56.
- **changes to the establishment survey population** – To consolidate the frame to minimize the number of independent sources, the Business Register was used in place of custom lists for universities and colleges.
- **change in the collection mode on the quality of response** – To improve the quality of the reported data and increase the response rate, the data collection process was altered for the current survey. In the 2008 CICES survey, after a telephone pre-contact, the questionnaire data were collected by mail-out/mail-back paper questionnaires. In 2009, the telephone pre-contact confirmed or updated address, contact person and industry information but the survey data were collected by computer-assisted personal interview, after worksheets were mailed to the respondent prior to the interview to help with completing the SCIEU questionnaire.
- **increase of response rate** – The increased response rate reduced the risk of non-response bias compared with previous CICES surveys. As well, the increased response rate may have yielded a different profile for the responding units that could have led to differences in the estimates.
- **change to the collection instrument** – Some questions were rephrased. As well, in 2009, for quantitative questions, if the respondent could not provide an exact value, a choice of ranges was provided to choose from.
- **increased focus on defining the coverage of each questionnaire for the respondents** – Increased efforts were made to ensure that the respondent was answering for the correct amount of physical space (i.e. report for the entire chain or only one address) because a roster of buildings was available, and there was more opportunity for contact with each respondent.

Comparisons with CIBEUS 2000

Estimates from the building component of SCIEU 2009 should be used only for comparison. Because of the significant methodological changes, the estimates should not be used together with estimates from CIBEUS 2000 to estimate trends. The following is a summary of the methodological changes:

- **changes to the target population** – The CIBEUS 2000 was limited to buildings in the largest 24 cities in Canada and included only buildings larger than 1000 square feet and had a minimum of one employee working in the building. The SCIEU 2009 target population included the entire country (with the exception of the territories) and did not exclude buildings based on size or the number of employees working in the building.
- **changes to the survey design** – The indirect sampling of buildings used for SCIEU 2009 and the two-stage approach used in CIBEUS 2000 both lead to valid population-level estimates. However, the independent nature of each sample design does not allow efficient estimates for comparison from year to year.
- **changes to the survey population** – The group of buildings enumerated by listing may not be equivalent to the group of buildings identified by respondents from the establishments. As well, the definition of a building was provided to interviewers but in some cases may have been interpreted differently by respondents than it would have been by a Statistics Canada employee conducting a listing exercise.
- **changes to the collection instrument** – The SCIEU 2009 questionnaire used different wording and concepts than those used in CIBEUS 2000. As well, the use of a worksheet and example via show cards in the SCIEU 2009 may have had an effect on the values provided by respondents.
- **changes to the collection mode** – The SCIEU 2009 used a computer-assisted personal interview (CAPI) whereas the CIBEUS 2000 used a pencil-and-paper personal interview. This difference could impact the reported values because more editing was possible during data collection with a CAPI.

- **subject-matter edits** – The subject-matter edits that were applied after data collection were different for each survey.
- **data processing –** The parameters of the nearest-neighbour imputation were not the same for the two surveys. As well, the factors used to convert dollar values to energy quantities were not the same.

Comparisons of the SCIEU 2009 establishment and building components

The comparisons that can be made between the estimates from the establishment and building components are somewhat limited. This is mainly due to a lack of common variables between the two components. In some cases where variables appear to be comparable, there are conceptual differences in their definitions. For example, the SCIEU definition of building floor space included basements while establishment floor space did not.

In addition, the target population for the two components did not correspond to exactly the same C&I space. For example, there were cases where areas were in-scope for the building components and out-of-scope for the establishment components of the survey. Furthermore, although the samples of buildings and establishments were based on the same initial sample, non-response was independent between the two components, and the ultimate set of respondents did not necessarily correspond to the same spaces. For example, an establishment may not know what the energy source is for heating, but the building manager will.

The estimated counts of in-scope units were not expected to be the same because the relationships between buildings and establishments were complex. No external information was available to provide an estimate of the relationship between the aggregated counts. Therefore, because of the conceptual differences underlying the establishment and building floor space, estimates of energy intensity (consumption divided by floor space) should not be expected to be equal.

The variable that affords the most comparable base for the estimates is energy consumption, and the estimates of establishment and building energy consumption at the national level vary by only 1 percent.

More information is available through Statistics Canada at **http://www23.statcan.gc.ca/imdb/p2sv.pl?Function=getSurvey&SDDS=5034&lang=en&db=imdb&adm=8&dis=2**.

APPENDIX B
GLOSSARY

building

A structure totally enclosed by walls that extend from the foundation to the roof, intended for human occupancy. Included in the survey as a specific exception were structures erected on pillars to elevate the first fully enclosed level but leave the sides at ground level open. Excluded from the survey as non-buildings were the following: structures (other than the exception just noted) that were not totally enclosed by walls and a roof (such as oil refineries, steel mills and water towers), street lights, pumps, billboards, bridges, oil storage tanks, construction sites and mobile homes and trailers, even if they housed commercial activity.

building activity

An activity or function that occupies the majority of the floor space of a building. The categories are designed to group buildings that have similar patterns of energy consumption (see Appendix C for details).

building characteristics

Information about the building that includes building floor space, year of construction, number of storeys, size, primary activity and hours of operation.

climate zone

A climatically distinct area, defined by long-term weather conditions that affect the heating and cooling loads in buildings (see Appendix E for details).

commercial and institutional building (see Appendix C for details)

A building that has more than 50 percent of its floor space used for commercial activities or for activities focusing on not-for-profit services in the public's interest. These buildings include, but are not limited to, the following:

- office buildings (non-medical)
- medical office buildings
- elementary and secondary schools
- nursing and residential care facilities
- warehouses
- hotels and motels
- hospitals
- food and beverage stores
- non-food retail stores
- vacant buildings
- other

cooling

The conditioning of air in a room for human comfort by a refrigeration unit (such as an air conditioner or heat pump) or by a central cooling or district cooling system that circulates chilled water. Use of fans or blowers by themselves without chilled air or water is not included in this definition of air conditioning.

diesel

A liquid petroleum product that is less volatile than gasoline and that is burned for space or water-heating purposes.

district chilled water

Water chilled outside of a building in a central plant and piped into the building as an energy source for cooling. Chilled water may be purchased from a utility or provided by a central physical plant in a separate building that is part of the same multi-building facility (for example, a hospital complex or university).

district heat

Steam or hot water produced outside of a building in a central plant and piped into the building as an energy source for space heating or another end use. The district heat may be purchased from a utility or provided by a central physical plant in a separate building that is part of the same multibuilding facility (for example, a hospital complex or university.) District heat includes district steam and/or district hot water.

district hot water

District heat in the form of hot water.

district steam

District heat in the form of steam.

electricity

Electric energy supplied to a building by a central utility via power lines or from a central physical plant in a separate building that is part of the same multibuilding facility. Electric power generated within a building for exclusive use in that building is specifically excluded from the definition of electricity as an energy source in this survey (see energy source).

electricity generation

As an energy end use, the onsite production of electricity by means of electricity generators on either a regular or emergency basis.

energy end use

A use for which energy is consumed in a building.

energy intensity

The amount of energy used per unit of activity. Energy intensity is usually given on an aggregate basis, as the ratio of the total consumption for a set of buildings to the total floor space in those buildings.

energy source

A type of energy or fuel consumed in a building. In this survey, information about the use of electricity, natural gas, oil, district steam heating and district hot water in commercial buildings is obtained from the building respondent and/or the utility selling the energy source to the building respondent. Electric power generated within a building for exclusive use in that building is specifically excluded from the definition of electricity as an energy source in this survey (see electricity).

establishment

The level at which the accounting data required to measure production is available (principal inputs, revenues, salaries and wages). The establishment, as a statistical unit, is defined as the most homogeneous unit of production for which the business maintains accounting records. From such records, all the data elements required to compile the full structure of the gross value of production (total sales or shipments and inventories), the cost of materials and services, and labour and capital used in production can be assembled.

floor space

All the area enclosed above or below ground by the exterior walls of a building, including hallways, lobbies, stairways, penthouses and elevator shafts, indoor parking and mechanical areas.

hours of operation

The time when the building is open for normal operation, not including the time when only maintenance, housekeeping or security staff may be in the building.

imputation

The statistical method used to allocate a value to a missing value from data obtained to minimize distortion in the estimation.

kerosene

A petroleum distillate with properties similar to those of No. 1 fuel oil; used primarily in space heaters, cooking stoves, and water heaters. In this report, no distinction is made between kerosene and fuel oil; kerosene is included in the "Distillates" category under "Energy source."

light fuel oil

A liquid petroleum product used as an energy source that is less volatile than gasoline. Fuel oil includes distillate fuel oil (Nos. 1, 2, and 4).

lighting

The illumination of the interior of a building by use of artificial sources of light.

natural gas

Hydrocarbon gas (mostly methane) supplied as an energy source to individual buildings by pipelines from a central utility company. Natural gas does not refer to liquefied petroleum gas (LPG) or to privately owned gas wells operated by a building owner (see also energy source, liquefied petroleum gas and propane).

number of floors

The number of levels in the tallest section of a building that are actually considered a part of the building, including parking areas, basements or other floors below ground level, but excluding half-floors, mezzanines, balconies and lofts.

propane

A gaseous petroleum product that liquefies under pressure. Propane is the major component of liquefied petroleum gas.

quality indicators

Coefficients of variation, which indicate the reliability of data, are used to determine which estimates may be published. Estimates whose coefficient of variation exceeds 40 percent are deemed too unreliable to be published.

space cooling

As an energy end use, the conditioning of air in a room for human comfort by a refrigeration unit (such as an air conditioner or heat pump) or by a central cooling or district cooling system that circulates chilled water. Excluded is the use of fans or blowers by themselves, without chilled air or water.

space heating

As an energy end use, the use of mechanical equipment (including wood stoves and active solar-heating devices) to heat all, or part, of a building to at least 10°C.

square footage

Floor space, in units of square feet. One square foot is approximately equal to 0.0929 square metres. (See floor space.)

water heating

As energy end use, the use of energy to heat water for purposes other than space heating.

wood

As an energy source, logs or wood products that are used as fuel.

year of construction

The year in which the major part or the largest portion of a building was constructed.

APPENDIX C
DESCRIPTIONS OF BUILDING ACTIVITY

commercial and institutional building

A building with more than 50 percent of its floor space used for commercial activities or for activities focusing on not-for-profit services in the public's interest. These buildings include, but are not limited to, the following:

- office buildings (non-medical)
- medical office buildings
- elementary and secondary schools
- nursing and residential care facilities
- warehouses
- hotels and motels
- hospitals
- food and beverage stores
- non-food retail stores
- vacant buildings
- other

office buildings (non-medical)

Applies to facility spaces used for general office, professional and administrative purposes. The floor area includes all supporting functions such as kitchens used by staff, lobbies, atriums, conference rooms and auditoria, fitness areas for staff, storage areas, stairways and elevator shafts.

medical office buildings

Applies to facility space used to provide diagnosis and treatment for medical, dental or psychiatric outpatient care. The floor area includes all supporting functions such as kitchens used by staff, laboratories, lobbies, atriums, conference rooms and auditoria, fitness areas for staff, storage areas, stairways and elevator shafts.

elementary and secondary schools

Facility space used as a school building for kindergarten through secondary school students. This does not include college or university classroom facilities and laboratories or vocational, technical or trade schools. The floor area includes all supporting functions such as administrative space, conference rooms, kitchens used by staff, lobbies, cafeterias, gymnasiums, auditoria, laboratory classrooms, portable classrooms, greenhouses, stairways, atriums, elevator shafts and storage areas.

nursing and residential care facilities

Facilities with permanent occupant care that provides rehabilitative, restorative and/or ongoing skilled nursing care to patients or residents in need of assistance with activities of daily living. Long-term care facilities include nursing homes and residential developmental handicap, mental health and substance abuse facilities. Purely residential retirement homes are not included in this category. The floor area includes all supporting functions such as administrative space, kitchens used by staff, lobbies and cafeterias.

warehouses

Applies to unrefrigerated or refrigerated buildings that are used to store goods, manufactured products, merchandise or raw materials. The floor area includes all supporting functions such as offices, lobbies, stairways, rest rooms, equipment storage areas and elevator shafts. Existing atriums or areas with high ceilings only include the base floor area that they occupy.

hotels and motels

Applies to buildings that rent overnight accommodations on a room/suite basis, typically including a bath/shower and other facilities in guest rooms. Hotel and motel properties typically have daily services available to guests, including housekeeping/laundry and a front desk / concierge. The floor area includes all interior space, including guestrooms, halls, lobbies, atriums, food preparation and restaurant space, conference and banquet space, health clubs/spas, indoor pool areas, and laundry facilities, as well as all space used for supporting functions such as elevator shafts, stairways, mechanical rooms, storage areas, employee break rooms and back-of-house offices. The term hotel/motel does not apply to fractional ownership properties such as condominiums or vacation timeshares. Hotel properties should be owned by a single entity and have rooms available on a nightly basis.

hospitals

Facilities that provide acute care services intended to treat patients for short periods (average less than 25 days) for any brief but severe medical condition, including emergency medical care, physicians' services, diagnostic care, ambulatory care and surgical care. Acute care hospitals typically discharge patients as soon as the patient is deemed healthy and stable. Note: Long-term care residences are not considered hospitals.

food and beverage stores

Applies to facility space used for the retail sale of food and beverage products. This description should not be used by restaurants. The floor area includes all supporting functions such as kitchens and break rooms used by staff, storage areas (refrigerated and non-refrigerated), administrative areas, stairwells, atriums and lobbies.

non-food retail stores

Applies to facility space used for the retail sale of everything other than food and beverage products.

vacant buildings

Building in which more floor space was vacant than was used for any single commercial activity at the time of interview. A vacant building may have some occupied floor space.

other

A building with more than 50 percent of its floor space used for commercial activities or for activities focusing on not-for-profit services in the public's interest, that is not listed in Appendix B. Examples include entertainment, leisure and recreation buildings (arenas), shopping centres, colleges and universities.

APPENDIX D

COMMERCIAL AND INSTITUTIONAL BUILDING ENERGY USE SURVEY – QUESTIONNAIRE

Business Special Surveys and Technology Statistics Division

Survey of Commercial and Institutional Energy Use, 2009

CONFIDENTIAL when completed

Collected under authority of the *Statistics Act*, Revised Statutes of Canada, 1985, Chapter S19.

Si vous préférez recevoir cette feuille de travail en français, veuillez composer le 1-800-263-1136.

Information for the Respondent

The purpose of this survey

Statistics Canada, in partnership with Natural Resources Canada and Environment Canada, is conducting this survey to collect detailed information on the energy demand and consumption patterns of Canadian businesses, organizations and institutions as well as buildings. This survey collects data on the types and quantities of energy (such as electricity, natural gas etc.) consumed by small, medium and large businesses and institutions in Canada. One of the principal goals of Natural Resources Canada is to continually improve energy efficiency in Canada through various measures. Improving energy efficiency reduces greenhouse gas emissions that contribute to climate change. Given the current energy situation, this survey will be used to assess how well Canada is fulfilling its commitment both to increasing energy efficiency and reducing greenhouse gas emissions.

This worksheet is designed to help you gather the required information prior to our personal interview that will take place. Gathering this information prior to your personal interview is crucial to the success of this initiative. You will be contacted shortly to set up an interview time that works for you.

Your participation is important

This survey is conducted under the authority of the *Statistics Act*, Revised Statutes of Canada, 1985, Chapter S19. Completion of this survey is mandatory and your co-operation is essential to ensure the accuracy of the information collected.

The data you report are confidential

Statistics Canada is prohibited by law from publishing or releasing any statistics which would divulge information obtained from this survey that relates to any identifiable business, organization or institution without the previous consent of that business or institution. The data reported in this worksheet will be treated in strict confidence, used for statistical purposes and published in aggregate form only. The confidentiality provisions of the *Statistics Act* are not affected by either the *Access to Information Act* or any other legislation.

Data sharing agreements

For information on data-sharing agreements, please refer to the letter included in this package.

1. For the purpose of this worksheet, please indicate the 12 month period in which you are reporting. The target of this survey is to capture data for 2009. If a fiscal period is being reported, please report for the fiscal year in which the most months are in 2009.

		Year		Month			Year		Month
		0101		0102			0103		0104
Starting		2 0			**Ending**		2 0		

2. As of December 2009, what was the gross building area?

- Include all enclosed floors of the building, such as indoor parking, mechanical areas, common areas and basements.
- If you don't know the exact area, please provide your best estimate (i.e. multiply the length of your building by its width and by the number of floors).

Please provide the specific area: 0201 ☐☐☐☐☐☐☐☐

What is the area measured in? 0202 01 ◯ Square meters 03 ◯ Square feet

5-5300-545.1: 2010-10-06 STC/SBS-524-75340

Statistics Canada Statistique Canada

Canada

3. As of December 2009, what was the total rentable floor area occupied by your organization?

- Exclude indoor parking, and areas occupied by other organizations.
- If your organization occupies space in more than one building, the total rentable area should include the space occupied by your organization in all buildings.
- If you don't know the exact area, please provide your best estimate.

Please provide the specific area: 0301 ☐☐☐☐☐☐☐☐

Is that measured in: 0302 01 ◯ Square meters 03 ◯ Square feet

4. What percentage of the gross building area occupied by this organization was heated to at least 10 degrees Celsius (50 degrees Fahrenheit) during 2009, including basements and enclosed garages? 0401 ☐☐☐ %

5. What percentage of the gross building area occupied by this organization was air conditioned during 2009, including basements? 0501 ☐☐☐ %

6. If your building is a warehouse space, please provide the volume of refrigerated space for the following categories?

- **Volume of space cooled to 1 degree Celsius or higher** 0601 ☐☐☐☐☐☐☐☐☐
- **Volume of space cooled between 0 and -28 degrees Celsius** 0602 ☐☐☐☐☐☐☐☐☐
- **Volume of space cooled below -28 degree Celsius** 0603 ☐☐☐☐☐☐☐☐☐

What are these volumes measured in? 0604 01 ◯ Cubic feet 03 ◯ Cubic meters

7. In which year was construction completed for the building?

If portions of the building were constructed at different times, please provide the year in which construction was completed for the largest portion. 0701 ☐☐☐☐

8. Please indicate the total number of normal operating hours for your building during a typical week.

Please exclude any time when maintenance, house-keeping, or security staff are working outside of the normal operating hours. If the hours vary for different parts of the building or complex, report for that area which is open the longest. 0801 ☐☐☐

9. If your building is an elementary or secondary school, how many students can be seated in all of the classrooms in this building at one time? 0901 ☐☐☐☐☐

10. If your building is an elementary or secondary school with portables, are the portables electrically powered by the main building supply? 1001 01 ◯ Yes 03 ◯ No

11. If your building is a hospital or nursing and residential care facility, what is the inpatient licensed bed capacity? 1101 ☐☐☐☐☐

12. How many people worked in the building during its main shift in 2009?

By main shift, we mean the shift when most people are in the building. 1201 ☐☐☐☐☐☐☐

5530545021

13. Please indicate the number of the following used in your building as of December 2009.

Type of Device	Number of Devices
Computers including laptops and other electronic devices with a micro-processor Exclude cash registers and battery-operated hand-held devices.	1301 ☐☐☐☐☐☐☐
Computer servers A computer server is a computer system that provides essential services over a computer network. Do not include personal computers or laptops.	1302 ☐☐☐☐
Vending machines	1303 ☐☐☐☐
Cash registers	1304 ☐☐☐☐☐☐☐
Medical diagnosis or treatment machines (e.g., X-ray, CAT scan, MRI, dialysis, ultrasound)	1305 ☐☐☐☐
Printers, photocopiers, fax machines and multi-functional devices (e.g. combined printer copier and fax)	1306 ☐☐☐☐☐
Automated Teller Machines (ATMs or bank machines)	1307 ☐☐☐
Major domestic appliances (appliance such as stoves, microwave ovens, refrigerators, freezers, dishwashers)	1308 ☐☐☐
Commercial food preparation appliances (e.g. stoves, ovens, refrigerators, freezers and dishwashers found in a cafeteria or restaurant)	1309 ☐☐☐☐
Laundry washers and dryers	1310 ☐☐☐☐
Sterilisation equipment	1311 ☐☐☐☐

14. If this building is a retail space, does it have open or closed refrigerated cases or freezer cases?

1401
- 01 ◯ Yes – *Continue*
- 03 ◯ No – *Go to Question 19*

15. What is the total length of the open refrigerated cases?

1501 ☐☐☐☐

Is that measured in:

1502
- 01 ◯ Meters
- 03 ◯ Feet

16. What is the total length of the closed refrigerated cases?

1601 ☐☐☐☐

Is that measured in:

1602
- 01 ◯ Meters
- 03 ◯ Feet

17. What is the total length of the open freezer cases?

1701 ☐☐☐☐

Is that measured in:

1702
- 01 ◯ Meters
- 03 ◯ Feet

18. What is the total length of the closed freezer cases?

1801 ☐☐☐☐

Is that measured in:

1802
- 01 ◯ Meters
- 03 ◯ Feet

5530545031

19. Which of the following types of heating equipment were used for spacing heating in this building?
Check all that apply.

1901 ◯ None
1902 ◯ Furnaces that heat air directly, without using steam or hot water
1903 ◯ Packaged central unit (roof mounted)
1904 ◯ Boilers inside (or adjacent to) the building that produce steam or hot water
1905 ◯ District steam or hot water piped in from outside the building
1906 ◯ Heat pumps – packaged
1907 ◯ Heat pumps – residential-type split system
1908 ◯ Heat pumps – individual room system
1909 ◯ Individual space heaters, other than heat pumps
1910 ◯ Other (Please Specify)
1911 [ ]

20. Which of the following types of cooling equipment were used for space cooling?
Check all that apply.

2001 ◯ None
2002 ◯ Residential-type central air conditioners, other than heat pumps, that cool air directly and circulate it without using chilled water
2003 ◯ Packaged air conditioning units, other than heat pumps
2004 ◯ Central chillers inside (or adjacent to) the building that chill water for air conditioning
2005 ◯ District chilled water piped in from outside the building
2006 ◯ Heat pumps for cooling – packaged unit
2007 ◯ Heat pumps for cooling – residential-type split system
2008 ◯ Heat pumps for cooling – individual room heat pump
2009 ◯ "Swamp" coolers or evaporative coolers
2010 ◯ Other (Please Specify)
2011 [ ]

21. Were any of the following renovations or retrofits executed during the years 2005 to 2009?
Check all that apply.

2101 ◯ None
2102 ◯ Lighting
2103 ◯ Cooling equipment
2104 ◯ Heating equipment
2105 ◯ Insulation of basement, roof or walls
2106 ◯ Windows
2107 ◯ Plumbing
2108 ◯ Addition or annex
2109 ◯ Reduction of enclosed floor space
2110 ◯ Other, please specify:
2111 [ ]

5530545041

22. For the 2009 calendar year, please indicate the main source of energy used to heat your building as well as any alternate sources used.

Energy Source	Main Energy Source for Space Heating *Mark (✓) one only*	Alternate Energy Source for Space Heating *Mark (✓) all that apply*
None	2201 01 ◯	2202 ◯
Electricity	02 ◯	2203 ◯
Natural Gas	03 ◯	2204 ◯
Light Fuel Oil	04 ◯	2205 ◯
Diesel	05 ◯	2206 ◯
Kerosene	06 ◯	2207 ◯
Propane or Other Bottled Gas	07 ◯	2208 ◯
District Steam purchased from an off-site plant	08 ◯	2209 ◯
District hot water purchased from an off-site plant	09 ◯	2210 ◯
District chilled water purchased from an off-site plant	10 ◯	2211 ◯
Wood or wood by-products	11 ◯	2212 ◯
On-site electricity generation (e.g. solar)	12 ◯	2213 ◯
Other – *Specify*	13 ◯	2214 ◯
	2215 ☐	2216 ☐

23. For the 2009 calendar year, please indicate only the main source of energy used to cool your organization. Also for 2009, please indicate the main source of energy used for domestic water heating (water used for consumption, not for space heating).

Energy Source	Main Energy Source for Space Cooling *Mark (✓) one only*	Main Energy Source for Domestic Water Heating *Mark (✓) one only*
None	2301 01 ◯	2302 01 ◯
Electricity	02 ◯	02 ◯
Natural Gas	03 ◯	03 ◯
Light Fuel Oil	04 ◯	04 ◯
Diesel	05 ◯	05 ◯
Kerosene	06 ◯	06 ◯
Propane or Other Bottled Gas	07 ◯	07 ◯
District Steam purchased from an off-site plant	08 ◯	08 ◯
District hot water purchased from an off-site plant	09 ◯	09 ◯
District chilled water purchased from an off-site plant	10 ◯	10 ◯
Wood or wood by-products	11 ◯	11 ◯
On-site electricity generation (e.g. solar)	12 ◯	12 ◯
Other – *Specify*	13 ◯	13 ◯
	2303 ☐	2304 ☐

5530545051

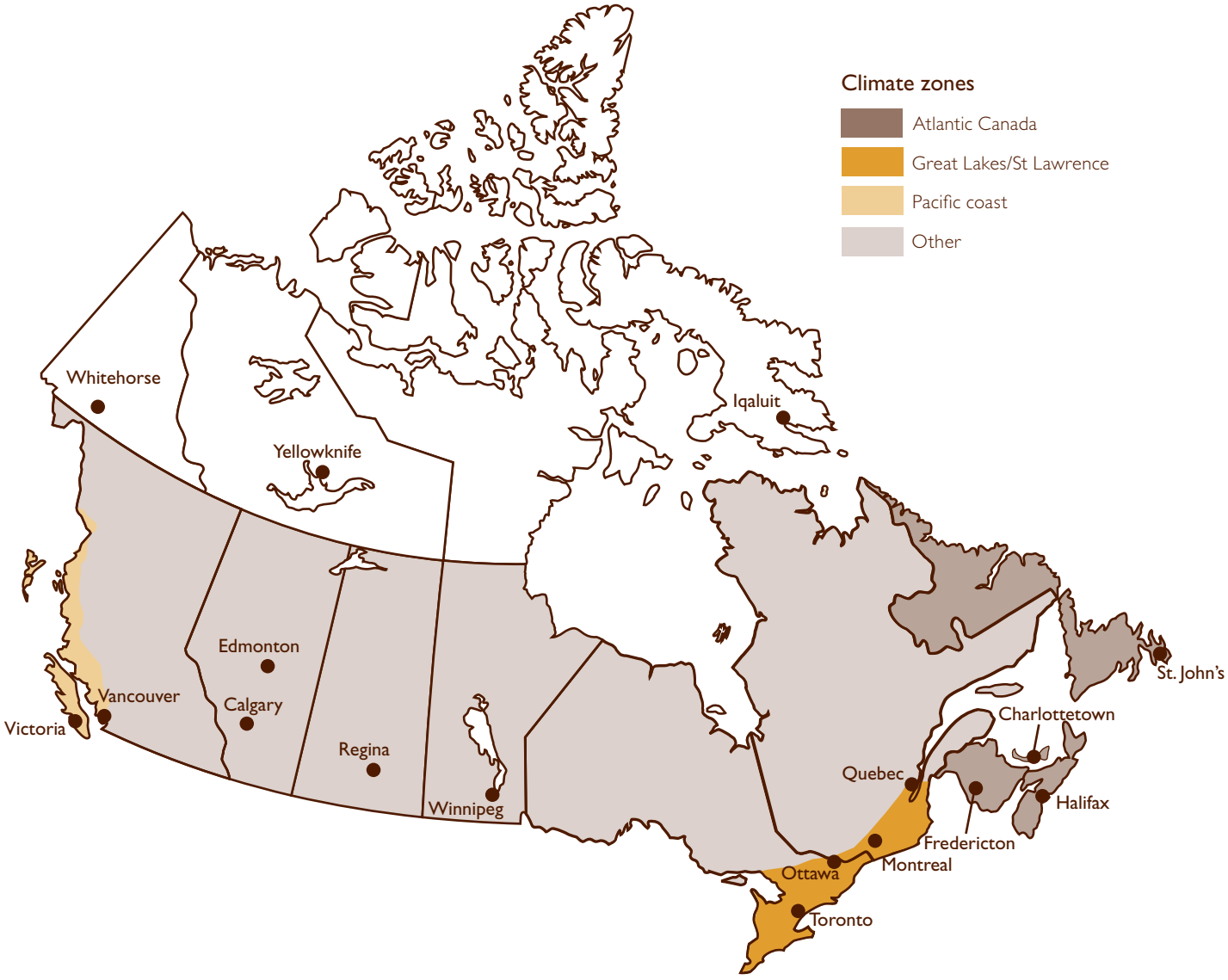
24. For the 2009 calendar year, please indicate the total quantity of energy consumed, the unit of measure, and the total amount spent for each source of energy consumed by your building.

- Please indicate only the energy consumed at the physical location of your building, relating to the floor area you have reported in question 2. If your landlord pays your energy bills please forward this question to the appropriate person. Do not include fuel or energy used for transportation.
- For amount spent, please report in Canadian dollars the total including taxes, service charges and any rebates.

Energy Source	Quantity Consumed	Energy Unit of Measure	Amount Spent Cdn $ (omit cents)
Electricity purchased (Exclude electricity generated at your building.)	2401	2402 01 kWh 02 MWh 03 GJ 04 Other ▶ 2403	2404 .00
Natural gas	2405	2406 01 m^3 02 L 03 ft^3 04 GJ 05 MMBtu 06 Other ▶ 2407	2408 .00
Light fuel oil	2409	2410 01 L 02 GJ 03 Gallons (US) 04 Gallons (UK) 05 Other ▶ 2411	2412 .00
Diesel	2413	2414 01 L 02 GJ 03 Gallons (US) 04 Gallons (UK) 05 Other ▶ 2415	2416 .00
Kerosene	2417	2418 01 L 02 GJ 03 Gallons (US) 04 Gallons (UK) 05 Other ▶ 2419	2420 .00
Propane or other bottled gas	2421	2422 01 L 02 kg 03 GJ 04 lbs 05 MMBtu 06 Other ▶ 2423	2424 .00
District steam purchased from an off-site plant	2425	2426 01 kg 02 GJ 03 lbs 04 1000 lbs 05 MMBtu 06 Other ▶ 2427	2428 .00
District hot water purchased from an off-site plant	2429	2430 01 GJ 02 MMBtu 03 Other ▶ 2431	2432 .00
District chilled water purchased from an off-site plant	2433	2434 01 GJ 02 MMBtu 03 Other ▶ 2435	2436 .00
Wood and wood by-products	2437	2438 01 Full cord 02 Pellets (tonnes) 03 Tonnes (metric) 04 lbs 05 Other ▶ 2439	2440 .00
Electricity generated on-site Including emergency generator usage	2441	2442 01 kWh 02 GJ 03 Other ▶ 2443	
Domestic Water Consumed	2444	2445 01 L 02 m^3 03 Not metered 04 Other ▶ 2446	

5530545061

APPENDIX E
CLIMATE ZONES



Source(s): Environment Canada, Atmospheric Environment Service, Climate Research Branch, 1998, Climate Trends and Variations Bulletin for Canada, Ottawa

In this report, the climate zone "other" includes all other climate zones shown in the map above that are not Atlantic Canada, Great Lakes / St. Lawrence or Pacific coast.

APPENDIX F
REGIONAL INFORMATION

As described in the foreword, it is important to note that SCIEU 2009 was designed to produce reliable estimates at the national level and for four climate zones (see Appendix E). However, it was possible to derive reasonable quality estimates for geographic regions. It should be noted that these derived regional estimates are not as robust as the climate zone estimates and should therefore be used with caution.

Table F.1 – Building characteristics and energy use by region and size

Region	Building size	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
Atlantic	**Total**	**48 089**	**A**	**70.1**	**A**	**72.0**	**A**	**1.03**	**A**
	5000 square feet or less (465 m^2 or less)	25 373	A	5.4	A	7.0	A	1.29	A
	5001 to 10 000 square feet (466 to 929 m^2)	9 198	A	6.0	A	6.0	A	1.00	A
	10 001 to 50 000 square feet (930 to 4645 m^2)	10 434	A	19.9	A	16.7	A	0.84	A
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	2 610	B	21.1	A	21.2	A	1.01	A
	Over 200 000 square feet (Over 18 580 m^2)	–	F	–	F	–	F	1.18	A
Quebec	**Total**	**103 684**	**A**	**176.4**	**A**	**157.4**	**A**	**0.89**	**A**
	5000 square feet or less (465 m^2 or less)	55 750	A	14.0	A	19.5	A	1.39	A
	5001 to 10 000 square feet (466 to 929 m^2)	16 688	A	10.7	A	10.0	B	0.94	A
	10 001 to 50 000 square feet (930 to 4645 m^2)	25 143	A	52.7	A	43.8	A	0.83	A
	50 001 to 200 000 square feet (4646 to 18,580 m^2)	4 607	A	40.1	A	34.2	A	0.85	A
	Over 200 000 square feet (Over 18 580 m^2)	1 496	C	59.0	C	–	F	0.85	A
Ontario	**Total**	**163 537**	**A**	**277.2**	**A**	**316.9**	**A**	**1.14**	**A**
	5000 square feet or less (465 m^2 or less)	80 082	A	20.6	A	37.8	B	1.8	A
	5001 to 10 000 square feet (466 to 929 m^2)	32 141	B	21.7	B	22.8	B	1.05	B
	10 001 to 50 000 square feet (930 to 4645 m^2)	39 054	A	80.4	A	87.1	A	1.08	A
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	10 103	A	81.2	A	83.6	A	1.03	A
	Over 200 000 square feet (Over 18 580 m^2)	2 157	B	73.3	A	85.7	B	1.17	A

(Continued)

Table F.1 – Building characteristics and energy use by region and size (continued)

Region	Building size	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
Prairies	**Total**	**105 519**	**A**	**156.1**	**A**	**210.9**	**A**	**1.35**	**A**
	5000 square feet or less (465 m^2 or less)	46 262	A	10.5	A	18.0	A	1.7	A
	5001 to 10 000 square feet (466 to 929 m^2)	21 428	A	14.9	A	25.4	A	1.7	A
	10 001 to 50 000 square feet (930 to 4645 m^2)	32 206	A	63.8	A	81.5	A	1.3	A
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	4 875	A	40.8	A	60.8	B	1.5	A
	Over 200 000 square feet (Over 18 580 m^2)	748	B	26.1	B	25.1	C	1.0	B
British Columbia	**Total**	**61 438**	**A**	**86.2**	**A**	**85.1**	**B**	**0.99**	**A**
	5000 square feet or less (465 m^2 or less)	29 072	A	6.7	A	–	F	–	F
	5001 to 10 000 square feet (466 to 929 m^2)	12 226	B	8.3	B	8.5	C	1.0	B
	10 001 to 50 000 square feet (930 to 4645 m^2)	16 727	A	35.8	B	–	F	0.8	C
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	3 124	A	25.2	A	26.3	A	1.0	A
	Over 200 000 square feet (Over 18 580 m^2)	288	B	10.2	B	8.6	B	0.8	A
Canada	**Total**	**482 266**	**A**	**765.9**	**A**	**842.2**	**A**	**1.10**	**A**
	5000 square feet or less (465 m^2 or less)	236 539	A	57.3	A	93.8	A	1.64	A
	5001 to 10 000 square feet (466 to 929 m^2)	91 680	A	61.6	A	72.7	A	1.18	A
	10 001 to 50 000 square feet (930 to 4645 m^2)	123 565	A	252.4	A	259.3	A	1.03	A
	50 001 to 200 000 square feet (4646 to 18 580 m^2)	25 319	A	208.3	A	226.1	A	1.09	A
	Over 200 000 square feet (Over 18 580 m^2)	5 162	A	186.4	A	190.4	A	1.02	A

Due to rounding, numbers may not add up to the total shown, and some number may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

Table F.2 – Building characteristics and energy use by region and year of construction

Region	Year of construction	Buildings	Q.I.	Floor space (millions of m²)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m²)	Q.I.
Atlantic	**Total**	**48 089**	**A**	**70.1**	**A**	**72.0**	**A**	**1.03**	**A**
	Before 1920	3 826	B	2.3	B	1.7	B	0.74	A
	1920 to 1959	8 892	A	6.6	A	6.4	A	0.97	A
	1960 to 1969	5 735	A	–	F	–	F	1.15	A
	1970 to 1979	7 030	A	14.2	A	14.5	A	1.02	A
	1980 to 1989	7 575	A	8.8	A	7.6	A	0.86	A
	1990 to 1999	8 108	A	10.0	B	10.6	B	1.06	A
	2000 or later	6 924	A	9.3	B	9.5	B	1.03	A
	2000 to 2004	4 105	B	3.0	A	3.4	A	1.14	A
	2005 or later	2 819	B	6.3	C	6.1	C	0.97	A
Quebec	**Total**	**103 684**	**A**	**176.4**	**A**	**157.4**	**A**	**0.89**	**A**
	Before 1920	11 236	C	13.6	B	13.6	C	1.0	A
	1920 to 1959	21 335	A	22.4	A	20.7	A	0.9	A
	1960 to 1969	15 648	A	33.2	B	22.6	A	0.7	A
	1970 to 1979	17 390	A	–	F	–	F	0.8	A
	1980 to 1989	22 187	A	22.2	B	19.3	B	0.9	A
	1990 to 1999	6 008	B	15.9	C	–	F	1.4	A
	2000 or later	9 879	B	16.3	B	14.0	B	0.9	B
	2000 to 2004	5 296	B	8.7	C	9.1	C	1.05	A
	2005 or later	–	F	–	F	4.9	C	–	F
Ontario	**Total**	**163 537**	**A**	**277.2**	**A**	**316.9**	**A**	**1.14**	**A**
	Before 1920	21 733	B	24.4	B	23.4	B	0.96	A
	1920 to 1959	28 543	B	39.4	B	44.8	B	1.14	A
	1960 to 1969	22 116	A	43.2	B	39.9	A	0.92	A
	1970 to 1979	19 051	B	41.1	A	65.5	A	1.59	A
	1980 to 1989	30 810	A	40.2	A	49.5	A	1.23	A
	1990 to 1999	22 203	C	40.5	B	43.6	C	1.08	A
	2000 or later	19 081	B	48.4	B	50.4	B	1.04	A
	2000 to 2004	7 988	C	28.6	B	27.5	B	0.96	B
	2005 or later	11 093	C	–	F	22.9	C	1.16	B

(Continued)

Table F.2 – Building characteristics and energy use by region and year of construction (continued)

Region	Year of construction	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
Prairies	**Total**	**105 519**	**A**	**156.1**	**A**	**210.9**	**A**	**1.35**	**A**
	Before 1920	–	F	–	F	7.8	C	0.94	B
	1920 to 1959	14 196	A	13.6	A	15.6	A	1.15	A
	1960 to 1969	16 520	B	19.5	A	26.5	A	1.36	A
	1970 to 1979	20 933	A	33.2	A	43.0	A	1.29	A
	1980 to 1989	18 783	A	31.9	A	41.3	A	1.30	A
	1990 to 1999	11 159	A	22.7	B	29.5	C	1.30	A
	2000 or later	16 875	B	26.9	B	47.2	C	1.75	A
	2000 to 2004	8 925	C	11.6	C	–	F	2.42	B
	2005 or later	7 950	C	15.3	C	19.1	C	1.25	A
British Columbia	**Total**	**61 438**	**A**	**86.2**	**A**	**85.1**	**B**	**0.99**	**A**
	Before 1920	3 104	C	5.4	C	4.0	C	0.75	B
	1920 to 1959	10 554	B	–	F	–	F	–	F
	1960 to 1969	7 738	C	11.3	C	9.9	B	0.88	A
	1970 to 1979	10 703	A	17.3	B	15.5	B	0.89	A
	1980 to 1989	12 049	B	13.1	C	–	F	–	F
	1990 to 1999	10 628	B	16.2	B	14.0	B	0.86	A
	2000 or later	6 660	B	13.7	B	16.0	B	1.17	B
	2000 to 2004	–	F	3.4	C	5.9	C	1.2	B
	2005 or later	–	F	10.3	C	10.1	C	0.7	A
Canada	**Total**	**482 266**	**A**	**765.9**	**A**	**842.2**	**A**	**1.10**	**A**
	Before 1920	46 951	A	54.0	A	50.5	A	0.88	A
	1920 to 1959	83 521	A	91.1	A	98.9	A	1.49	A
	1960 to 1969	67 758	A	126.1	A	120.6	A	1.32	A
	1970 to 1979	75 107	A	158.6	A	183.1	A	1.15	A
	1980 to 1989	91 404	A	116.2	A	131.9	A	1.14	A
	1990 to 1999	58 106	A	105.3	A	120.1	A	1.14	A
	2000 or later	59 418	A	114.6	A	137.1	A	1.20	A
	2000 to 2004	29 316	A	55.3	A	74.0	B	1.34	A
	2005 or later	30 102	A	59.4	B	63.1	A	1.06	A

Due to rounding, numbers may not add up to the total shown, and some number may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

Table F.3 – Building characteristics and energy use by region and hours of operation

Region	Hours of operation	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
Atlantic	**Total**	**48 089**	**A**	**70.1**	**A**	**72.0**	**A**	**1.03**	**A**
	36 or less	5 401	B	2.9	B	1.9	B	0.66	A
	37 to 48	13 568	A	15.1	A	11.4	A	0.76	A
	49 to 72	11 448	A	12.2	A	9.3	A	0.77	A
	73 to 96	4 054	B	9.9	C	8.7	B	0.88	A
	97 to 120	4 425	B	5.8	B	8.6	B	1.49	A
	121 to 168	9 194	A	24.3	C	32.0	C	1.32	A
Quebec	**Total**	**103 684**	**A**	**176.4**	**A**	**157.4**	**A**	**0.89**	**A**
	36 or less	12 554	B	7.1	C	6.7	C	0.95	A
	37 to 48	25 991	A	28.5	B	27.3	C	0.96	B
	49 to 72	36 826	A	65.3	C	47.2	C	0.72	A
	73 to 96	9 517	B	20.4	B	21.1	A	1.03	A
	97 to 120	7 068	A	14.0	B	13.5	B	0.97	A
	121 to 168	11 728	A	41.1	B	41.5	A	1.01	A
Ontario	**Total**	**163 537**	**A**	**277.2**	**A**	**316.9**	**A**	**1.14**	**A**
	36 or less	16 151	B	11.6	B	10.6	B	0.92	A
	37 to 48	43 636	A	53.7	B	41.9	B	0.78	A
	49 to 72	49 137	A	80.1	A	69.7	A	0.87	A
	73 to 96	16 063	B	38.2	A	50.9	A	1.33	A
	97 to 120	14 629	B	23.0	C	40.4	C	1.76	A
	121 to 168	23 921	B	70.6	A	103.3	A	1.46	A

(Continued)

Table F.3 – Building characteristics and energy use by region and hours of operation (continued)

Region	Hours of operation	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
Prairies	Total	105 519	A	156.1	A	210.9	A	1.35	A
	36 or less	9 286	B	6.8	B	5.4	B	0.79	B
	37 to 48	33 083	A	36.9	A	37.3	A	1.01	A
	49 to 72	31 447	A	46.4	A	56.3	A	1.21	A
	73 to 96	11 135	B	23.1	B	33.2	C	1.44	B
	97 to 120	6 161	A	11.7	A	29.3	B	2.51	A
	121 to 168	14 407	C	31.2	B	49.4	B	1.58	A
British Columbia	Total	61 438	A	86.2	A	85.1	B	0.99	A
	36 or less	4 941	C	3.4	B	2.2	B	0.66	A
	37 to 48	16 111	B	13.9	C	–	F	0.75	B
	49 to 72	20 863	A	30.0	A	24.4	B	0.82	A
	73 to 96	6 612	B	17.5	B	15.3	B	0.87	A
	97 to 120	6 210	C	8.1	B	–	F	1.55	C
	121 to 168	6 701	C	13.3	C	–	F	1.52	C
Canada	Total	482 266	A	765.9	A	842.2	A	1.10	A
	36 or less	48 333	A	31.8	A	26.8	A	0.84	A
	37 to 48	132 389	A	148.2	A	128.4	A	0.87	A
	49 to 72	149 721	A	234.0	A	207.0	A	0.88	A
	73 to 96	47 380	A	109.0	A	129.2	A	1.18	A
	97 to 120	38 492	A	62.5	A	104.5	A	1.67	A
	121 to 168	65 951	A	180.4	A	246.3	A	1.37	A

Due to rounding, numbers may not add up to the total shown, and some number may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

Table F.4 – Building characteristics and energy use by region and primary activity

Region	Primary activity	Buildings	Q.I.	Floor space (millions of m²)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m²)	Q.I.
Atlantic	**Total**	**48 089**	**A**	**70.1**	**A**	**72.0**	**A**	**1.03**	**A**
	Office building (non-medical)	7 654	A	6.8	A	6.6	B	0.97	A
	Medical office building	735	B	0.7	B	0.6	B	0.80	A
	Elementary or secondary school	2 062	B	8.3	A	6.4	B	0.77	A
	Nursing or residential care facility	1 192	B	1.7	B	2.4	B	1.40	A
	Warehouse	2 585	B	4.3	B	2.0	B	0.47	A
	Hotel or motel	2 044	B	1.8	A	1.9	A	1.07	A
	Hospital	126	B	2.5	B	6.4	B	2.60	A
	Food or beverage store	5 395	A	3.5	C	7.8	C	2.22	A
	Non-food retail store	3 406	B	6.8	C	5.2	C	0.76	A
	Other*	22 891	A	33.8	B	32.6	C	0.96	A
Quebec	**Total**	**103 684**	**A**	**176.4**	**A**	**157.4**	**A**	**0.89**	**A**
	Office building (non-medical)	12 746	A	–	F	–	F	0.93	A
	Medical office building	2 389	B	1.7	B	2.0	C	1.18	A
	Elementary or secondary school	3 481	B	17.8	C	11.8	B	0.66	A
	Nursing or residential care facility	1 166	B	6.1	B	6.1	A	1.01	A
	Warehouse	5 199	B	–	F	6.7	C	0.36	B
	Hotel or motel	–	F	–	F	–	F	1.26	B
	Hospital	109	A	3.0	A	6.3	A	2.08	A
	Food or beverage store	7 737	B	7.4	C	11.7	B	1.58	A
	Non-food retail store	13 296	B	9.3	B	6.5	C	0.70	A
	Other*	56 410	A	63.7	A	60.0	A	0.94	A
Ontario	**Total**	**163 537**	**A**	**277.2**	**A**	**316.9**	**A**	**1.14**	**A**
	Office building (non-medical)	34 007	A	47.0	A	63.7	B	1.35	A
	Medical office building	2 196	C	1.9	B	2.0	C	1.08	A
	Elementary or secondary school	6 708	A	30.8	A	25.5	A	0.83	A
	Nursing or residential care facility	1 457	B	–	F	20.7	C	1.60	A
	Warehouse	11 960	B	40.2	B	26.7	B	0.66	A
	Hotel or motel	–	F	5.3	C	–	F	1.30	C
	Hospital	207	A	6.2	A	16.9	B	2.71	A
	Food or beverage store	13 142	B	9.4	B	36.7	B	3.91	A
	Non-food retail store	13 830	B	13.5	B	13.4	B	0.99	B
	Other*	76 958	A	110.0	A	104.4	A	0.95	A

(Continued)

Table F.4 – Building characteristics and energy use by region and primary activity (continued)

Region	Primary activity	Buildings	Q.I.	Floor space (millions of m^2)	Q.I.	Energy use (PJ)	Q.I.	Energy intensity (GJ/m^2)	Q.I.
Prairies	**Total**	**105 519**	**A**	**156.1**	**A**	**210.9**	**A**	**1.35**	**A**
	Office building (non-medical)	19 458	B	31.0	B	47.7	B	1.54	A
	Medical office building	3 513	C	3.6	B	4.0	C	1.12	A
	Elementary or secondary school	3 160	A	16.9	B	14.4	A	0.85	A
	Nursing or residential care facility	1 415	B	3.1	B	8.0	C	2.54	A
	Warehouse	10 008	C	13.1	A	13.8	A	1.05	A
	Hotel or motel	2 182	B	–	F	–	F	1.53	B
	Hospital	174	A	1.4	B	3.9	B	2.74	A
	Food or beverage store	8 675	A	5.0	A	16.4	A	3.25	A
	Non-food retail store	16 092	B	27.0	B	32.1	C	1.19	A
	Other*	40 842	A	47.9	A	60.0	A	1.25	A
British Columbia	**Total**	**61 438**	**A**	**86.2**	**A**	**85.1**	**B**	**0.99**	**A**
	Office building (non-medical)	9 718	B	16.0	B	14.9	B	0.93	A
	Medical office building	1 692	B	1.8	B	1.9	B	1.06	A
	Elementary or secondary school	3 014	A	9.8	A	6.4	A	0.65	A
	Nursing or residential care facility	1 252	B	1.2	B	1.9	B	1.63	A
	Warehouse	–	F	6.8	C	–	F	0.84	B
	Hotel or motel	–	F	3.6	A	4.5	B	1.25	A
	Hospital	136	A	1.9	B	3.0	B	1.58	A
	Food or beverage store	5 453	A	3.9	B	10.1	B	2.55	A
	Non-food retail store	10 126	B	12.3	C	7.9	B	0.65	A
	Other*	25 404	A	29.0	B	–	F	–	F
Canada	**Total**	**482 266**	**A**	**765.9**	**A**	**842.2**	**A**	**1.10**	**A**
	Office building (non-medical)	83 583	A	147.5	A	176.6	A	1.20	A
	Medical office building	10 525	A	9.6	A	10.5	A	1.09	A
	Elementary or secondary school	18 425	A	83.6	A	64.4	A	0.77	A
	Nursing or residential care facility	6 482	A	25.0	B	39.1	B	1.56	A
	Warehouse	32 879	A	83.0	A	55.0	A	0.66	A
	Hotel or motel	9 963	C	19.7	B	26.5	C	1.35	A
	Hospital	752	A	15.1	A	36.5	A	2.42	A
	Food or beverage store	40 403	A	29.3	A	82.7	A	2.82	A
	Non-food retail store	56 750	A	68.9	A	65.2	A	0.95	A
	Other*	222 505	A	284.3	A	285.8	A	1.01	A

Due to rounding, numbers may not add up to the total shown, and some number may differ from one table to the next.

Quality indicators (Q.I.) classify each estimate according to its quality as follows: A–Excellent, B–Good, C–Acceptable, D–Use with caution, F–Too unreliable to be published and X–suppressed due to confidentiality. See the "How to read these tables" section.

* Other includes all other commercial buildings. See Appendix C for more details.

Notes