

Survey of Commercial and Institutional Energy Use: Commercial and institutional buildings, 2019

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Climate change and its impacts have been identified as important issues for Canada. Energy efficiency strategies are intended to mitigate the impacts of climate change, including the National Net-Zero Emissions Building Strategy, designed to achieve net-zero emissions for buildings by 2050 through codes and incentives. The Survey of Commercial and Institutional Energy Use provides data on energy demand and consumption in commercial and institutional buildings across the provinces; hospitals and post-secondary institutions are excluded from this release.

In 2019, there were over half a million commercial and institutional buildings (555,951) in Canadian provinces, occupying a total floor area of 709.0 million square metres (m²). The total energy consumed by these commercial and institutional buildings in 2019 was 948.2 million gigajoules (GJ), while the average energy use intensity (EUI) in Canadian provinces was 1.31 gigajoules per square metre (GJ/m²). The average household in Canada consumes 88.4 GJ per year, meaning that the total energy used by commercial and institutional buildings is equivalent to the annual energy use of over 10.7 million households.

Table 1
Profile of energy use by commercial and institutional buildings, all provinces, 2019

	Total floor area	Total energy consumption	Average energy use intensity
	m ²	GJ	GJ/m ²
All provinces	709,029,612	948,216,746	1.31

Source(s): Survey of Commercial and Institutional Energy Use, 2019 (5034).

Restaurants account for the highest average energy use intensity in commercial and institutional buildings

Across all provinces, buildings where restaurant was the main activity represented the highest average EUI at 2.58 GJ/m². Buildings where the main activity was vehicle dealership, repair and storage had the second highest average EUI (1.76 GJ/m²). Building activity types that had the lowest average EUI were museum or gallery (0.85 GJ/m²), primary or secondary school (0.91 GJ/m²), and medical office space (0.91 GJ/m²).

Table 2
Average energy use intensity by commercial and institutional building activity type, all provinces, 2019

	Average energy use intensity
	GJ/m ²
All activity types	1.31
Restaurant	2.58
Vehicle dealership, repair, or storage	1.76
Mixed use	1.47
Assisted living facility	1.43
Food or beverage store	1.34
Hotel, motel, hostel, or lodge	1.28
Other commercial and institutional building	1.18
Warehouse	1.16
Ice rink	1.15
Recreation centre	1.07
Office space (excluding medical offices)	1.04
Retail (non-food)	1.04
Library or archives	1.01
Preschool or daycare	0.98
Public safety (police and fire station)	0.96
Place of worship	0.95
Bank branch	0.94
Office space (medical)	0.91
Primary or secondary school	0.91
Museum or gallery	0.85

Source(s): Survey of Commercial and Institutional Energy Use, 2019 (5034).

Note to readers

The 2019 Survey of Commercial and Institutional Energy Use was conducted in partnership with Natural Resources Canada. The survey is divided into two components, one on commercial and institutional buildings and a second on post-secondary and hospital campuses. This release describes the results of the commercial and institutional building component. The [results for the post-secondary and hospital campus component](#) are also available.

Statistics Canada's Statistical Building Register was used as the survey frame for the commercial and institutional building component. The survey results are based on a sample of 62,094 buildings. Building activity type was reported by respondents during collection. The survey results do not include the territories.

To be in-scope for the commercial and institutional building component of the survey, the minimum floor area of the building needed to be at least 50 square metres, where at least 50% of the floor space was used for commercial or institutional activities, and where the floor space was either partially or fully in use or available for use in 2019. Military bases, embassies and stand-alone portable structures were excluded.

Direct comparisons of results with previous reference years cannot be made given changes to the survey frame, target population, sample design and questionnaire content.

Definitions

A **gigajoule** is a unit of measure for energy consumption equivalent to one billion joules; one gigajoule of electricity could keep a 60-watt light bulb continuously lit for six months.

Energy use intensity is the total energy consumed expressed in gigajoules divided by total floor area expressed in square metres (GJ/m^2). Higher energy use per square metre of floor area is considered more energy intensive.

Average energy use intensity is obtained by totalling the energy use intensity then dividing it by the number of buildings. The result illustrates the energy efficiency of an average building.

Definitions, data sources and methods: survey number [5034](#).

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