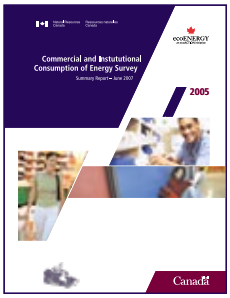
Natural Resources Canada | Ressources naturelles Canada

Results of the 2005 Commercial and Institutional Consumption of Energy Survey

ecoENERGY
an ecoACTION initiative

The Commercial and Institutional Consumption of Energy Survey collects data on the energy consumption of commercial and institutional establishments in Canada. The survey is conducted by Statistics Canada for the Office of Energy Efficiency (OEE) of Natural Resources Canada.

Based on the results of the 2005 survey, the OEE has published a summary report providing data on the energy consumption, energy usages and energy intensity of commercial and institutional establishments.

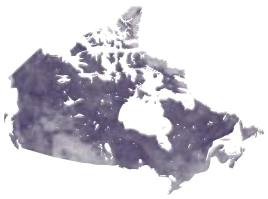


Overview of the Commercial and Institutional Sector

According to the OEE report, there were over 440 000 commercial and institutional establishments in Canada in 2005. They used more than 1036 million gigajoules (GJ) of energy – an annual consumption rate almost twice that of all Ontario households combined.

The most-used source of energy was shown to be natural gas, accounting for 44 percent of overall Canadian consumption, with electricity representing 42 percent.

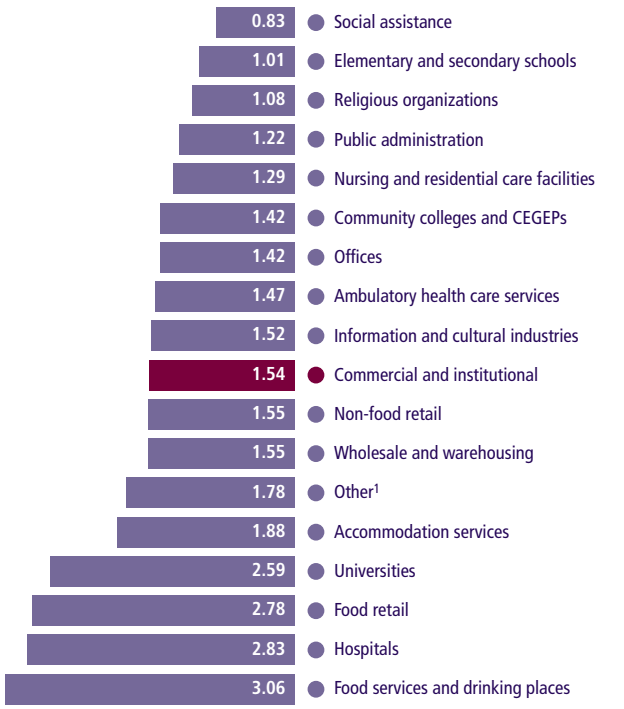
The total floor area of all the establishments exceeds 671 million square metres (m^2), which corresponds to an area larger than Montréal Island.



Energy-intensity Ratios

The OEE report also provides the energy-intensity ratio – the energy consumption divided by the floor area – of surveyed establishments. These ratios can be used for such purposes as identifying areas of activity with the highest energy intensity. In 2005, the energy intensity for the entire sector was 1.54 GJ/m^2.

Energy-intensity (GJ/m^2) by activity sector



[1] The residual category Other includes the categories Arts, Entertainment and Recreation (NAICS 71) and Other services except Public Administration (religious organizations not included) (NAICS 81, except 813110).

Canada

The report examines the energy intensity of 17 subsectors. The least intensive are social assistance establishments, primary and secondary schools and religious organizations, which typically have relatively short hours of operation or rarely operate beyond normal office hours. The report also shows that these subsectors have less energy-intensive equipment and use less air conditioning than other subsectors.

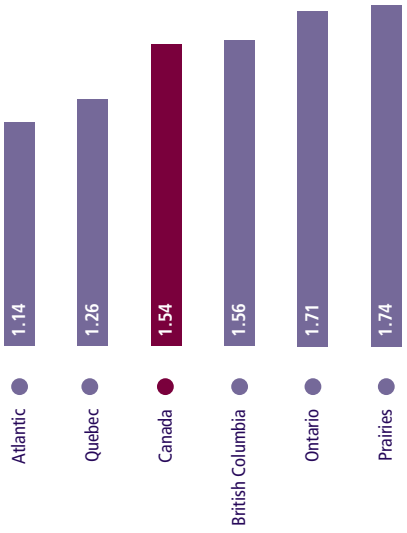
The reverse is true of restaurants and drinking places, hospitals, food stores and universities, which are shown to be the most energy-intensive subsectors. Establishments in these areas, such as hospitals, tend to have sophisticated energy-intensive equipment or, in the case of restaurants, a variety of specialized equipment, such as ovens or freezers. Moreover, these establishments often have longer hours of operation.

Regional Energy-intensity Differences

The Atlantic region has the lowest energy intensity, followed by Quebec. Both have a lower energy intensity than the Canadian average. The Prairies have the highest intensity, followed by Ontario and British Columbia.

There are many possible reasons for these differences. The distinct climate of each region, the forms of energy available and the subsectors of activity that are predominant in each region may all play a role. The OEE report discusses some of these factors that impact the intensity of energy use in each region.

Energy intensity (GJ/m^2) by region



Other Results Found in the OEE Report

The survey covered various aspects of energy consumption in the commercial and institutional sector, including the physical and structural components that impact energy consumption of establishments.

- It is estimated that commercial and institutional establishments spent nearly $17.6 billion on energy in 2005.
- Eighty-six percent of establishments were air-conditioned, with 89 percent of these using electricity as the main energy source and 9 percent using natural gas.
- There is no strong or obvious correlation between the age of establishments and their energy intensity. However, the report does show that the more recently built establishments are among the least energy intensive.
- Pre-1920 buildings also have lower energy intensities, presumably because many of them have been renovated.
- The average year of construction of buildings was 1975. In general, the Atlantic region had the oldest buildings (1971) and British Columbia the most recent (1980).

To read the full report of the Commercial and Institutional Consumption of Energy Survey, go to our Web site, oee.nrcan.gc.ca/statistics.

For more information on the survey or the services of the OEE, e-mail us at euc.cec@nrcan.gc.ca.

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