

# Energy Benchmarking Data Snapshots for Canadian Buildings



## QUICK FACTS

**16,500** buildings

**189 million m<sup>2</sup>**

**1.6 GJ/m<sup>2</sup> median source energy use intensity (EUI)**

**1 GJ/m<sup>2</sup> median site energy use intensity (EUI)**

Growth in the tool since August 2013

**+185%** buildings registered  
**+90%** floor space

**ENERGY STAR Portfolio Manager** is used to track the energy use of thousands of properties in Canada. This document provides a snapshot of the Canadian data entered into the ENERGY STAR Portfolio Manager benchmarking tool as of December 2016. Portfolio Manager was adapted to meet Canadian requirements and was launched in Canada in August 2013.

Figure 1. Benchmarking by building type

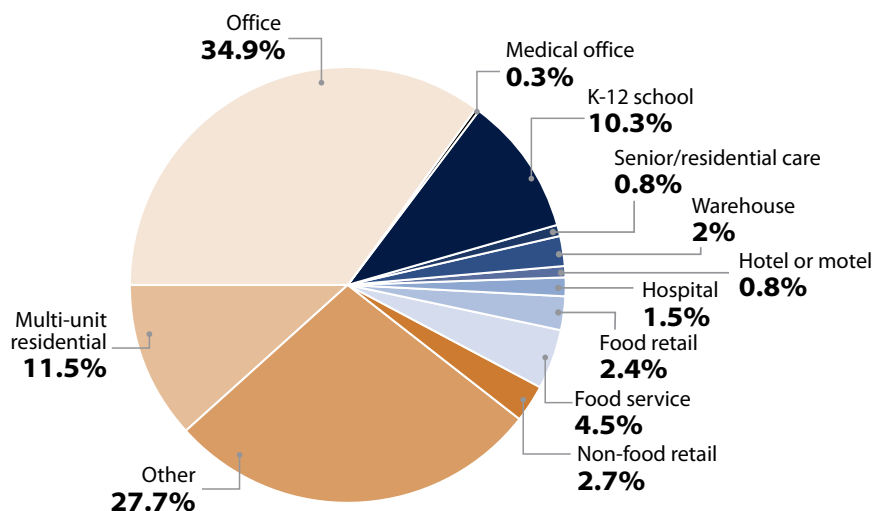


Figure 1 shows that 35.1% of buildings registered in ENERGY STAR Portfolio Manager are classified as office buildings (including financial offices). The next largest segments are other, multi-unit residential buildings and K-12 schools.

Table 1. Benchmarking by province and territory

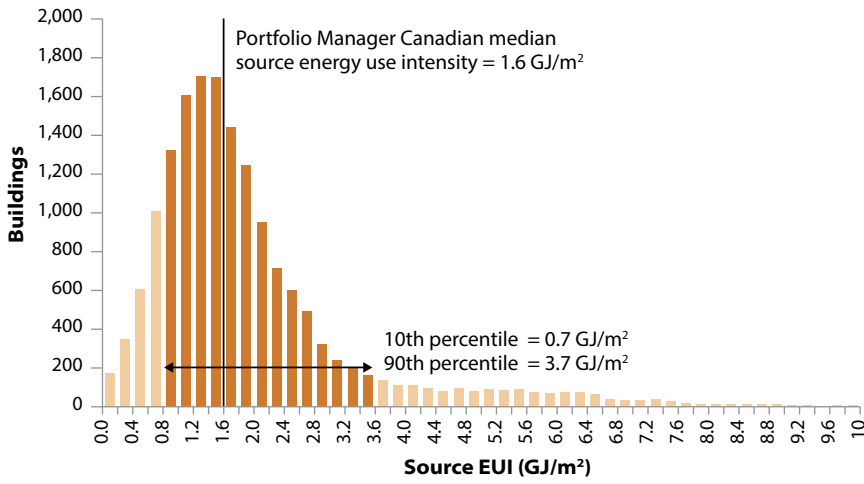
Province or territory	Buildings	Floor space (m <sup>2</sup> )
Alberta	2,500	30,000,000
British Columbia	3,150	27,500,000
Manitoba	2,250	7,250,000
New Brunswick	200	1,000,000
Newfoundland and Labrador	100	750,000
Nova Scotia	525	3,250,000
Northwest Territories	30	100,000
Nunavut	<20	-
Ontario	5,950	93,500,000
Prince Edward Island	55	250,000
Quebec	1,150	21,000,000
Saskatchewan	275	1,250,000
Yukon	25	100,000
Other/Non-identified	175	1,000,000
<b>Total</b>	<b>16,500</b>	<b>188,500,000</b>

\* For privacy reasons, data are not provided for provinces and territories with fewer than 20 registered buildings.

\* Numbers may not sum to the total indicated due to rounding.



Figure 2. Source EUI distribution



**Energy use distribution**

The median source EUI for all buildings in ENERGY STAR Portfolio Manager is 1.6 GJ/m<sup>2</sup>.

**Cities**

The buildings in Table 2 represent 81% of the floor space in Canada and 56% of the buildings registered in Portfolio Manager.

**Building distribution**

Figure 3 shows that larger buildings represent a relatively small portion of the number of buildings but account for almost half of the total floor space being tracked in Portfolio Manager.

**Energy use profiles**

Figure 4 shows the range (10th to 90th percentile) of EUI by building type. Overall, median source EUI ranges from slightly below 1 GJ/m<sup>2</sup> to just over 6 GJ/m<sup>2</sup>.

Table 2. Benchmarking cities with most buildings

City	Province	Buildings	Floor space (m <sup>2</sup> )	Median size (m <sup>2</sup> )
Toronto	Ont.	3,250	71,000,000	10,100
Vancouver	B.C.	2,200	23,500,000	4,300
Calgary	Alta.	950	18,000,000	5,800
Winnipeg	Man.	875	5,250,000	2,900
Montréal	Que.	625	17,500,000	9,200
Edmonton	Alta.	500	8,000,000	5,700
Ottawa	Ont.	300	4,500,000	6,900
Halifax	N.S.	250	2,250,000	4,300
Victoria	B.C.	250	1,250,000	2,700
Québec	Que.	100	1,250,000	5,200
Total		9,300	152,500,000	-

Figure 3. Distribution of buildings

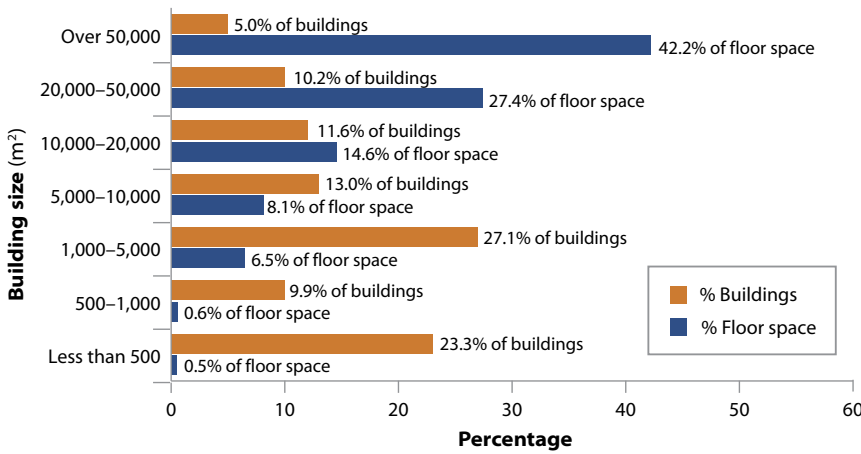
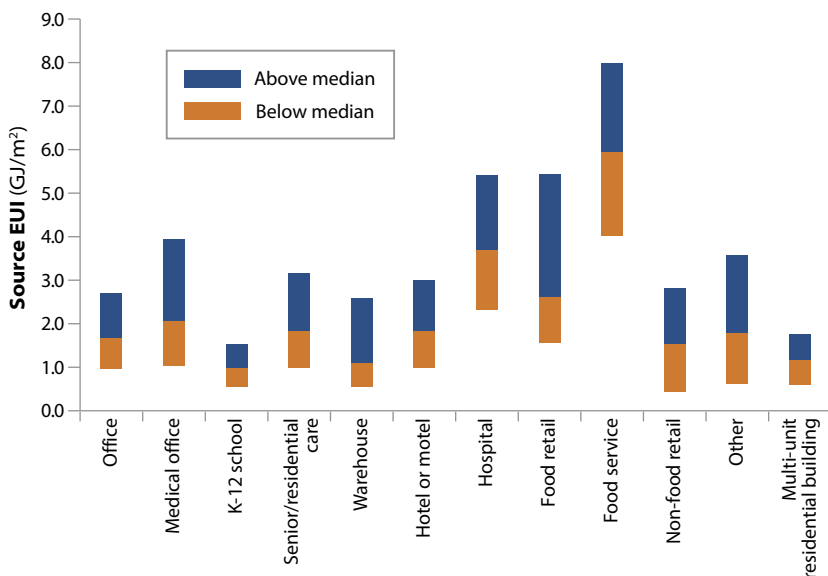


Figure 4. Energy use profiles



**SITE ENERGY VERSUS SOURCE ENERGY**

There are two ways of measuring energy: at the site and at the source.

**SITE ENERGY** is the simplest way to measure energy because it accounts only for the energy your property itself uses, as measured by your energy meters. The usage that appears on your utility bills is a site energy measurement.

**SOURCE ENERGY** not only measures the energy used by your property, but also accounts for energy losses incurred during the production, transmission and delivery of energy to your property, thus offering a more complete picture of the energy actually required to run your building.

ENERGY STAR Portfolio Manager uses **Source energy**. This is the most equitable unit of evaluation which enables a complete assessment of building-level energy efficiency.

For more information, see the **ENERGY STAR Portfolio Manager Technical Reference: Source Energy**.

The data is self-reported and has been filtered to exclude outliers, buildings with less than a full year of consumption data and cases that are used for testing purposes. Due to rounding, numbers may not add up to totals shown, and some numbers may differ from one table to the next. Buildings registered in Portfolio Manager do not represent a randomly selected sample and are not the basis for the ENERGY STAR score. For more information on ENERGY STAR Portfolio Manager, contact Natural Resources Canada at [info.services@nrcan-rncan.gc.ca](mailto:info.services@nrcan-rncan.gc.ca).