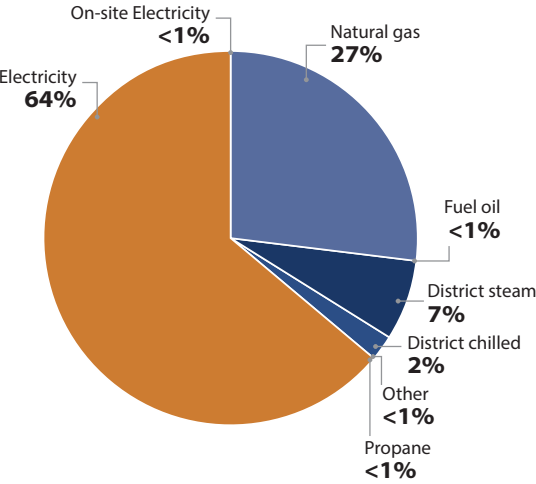


Energy Benchmarking Data Snapshot for Offices

QUICK FACTS

- **6,700** office buildings
- **138.5 million** m² floor area
- **1.0** GJ/m² median **site** energy use intensity (EUI)
- **1.6** GJ/m² median **source** energy use intensity (EUI)
- **160** ENERGY STAR certified offices

Figure 1. Total energy use breakdown



Fuel mix breakdown for offices in Portfolio Manager

ENERGY STAR® Portfolio Manager® is a tool used to track the energy use of 24,000 buildings in Canada. Energy benchmarking can help identify opportunities to save on energy costs and reduce environmental impact. This document provides a snapshot of the Canadian data for offices (Offices and Financial Offices) entered into Portfolio Manager as of December 2019.

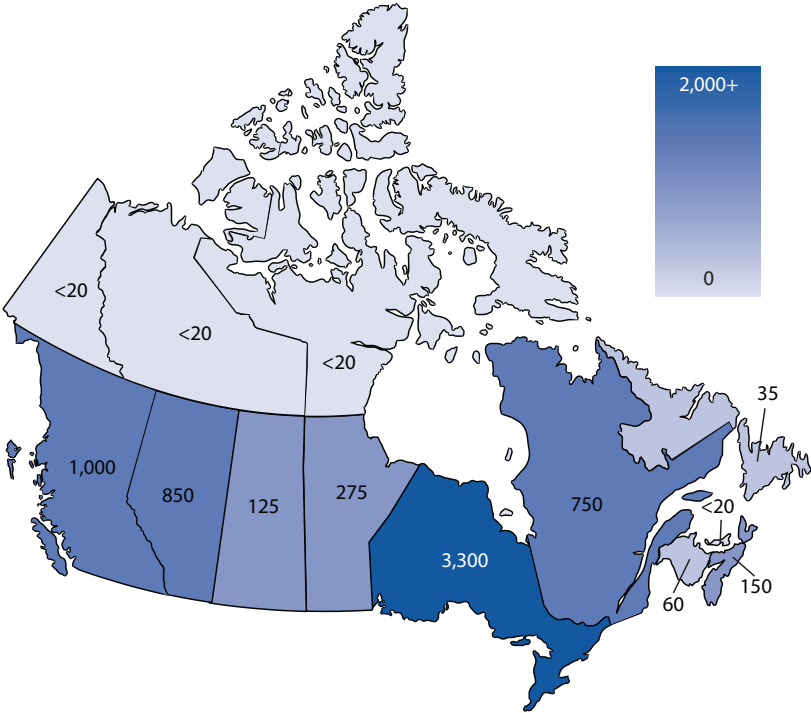


Table 1. Benchmarking by province and territory			
Province or territory	Buildings	Floor area (m ²)	Certified
Alberta	850	20,000,000	36
British Columbia	1,000	16,000,000	27
Manitoba	275	2,750,000	5
New Brunswick	60	250,000	1
Newfoundland and Labrador	35	150,000	0
Northwest Territories	<20	<100,000	0
Nova Scotia	150	1,500,000	2
Nunavut	<20	<100,000	0
Ontario	3,300	75,000,000	72
Prince Edward Island	<20	100,000	0
Quebec	750	21,000,000	16
Saskatchewan	125	950,000	1
Yukon	<20	<100,000	0
Total	6,700	138,500,000	160

For privacy reasons, data are not provided for provinces and territories with fewer than 20 registered building and/or 100,000 m² of gross floor areas. Numbers may not sum to the total indicated because of rounding. Variations from previous snapshots are possible because of changes in user entry, improved filtering, and data cleaning.



Figure 2. Source EUI distribution

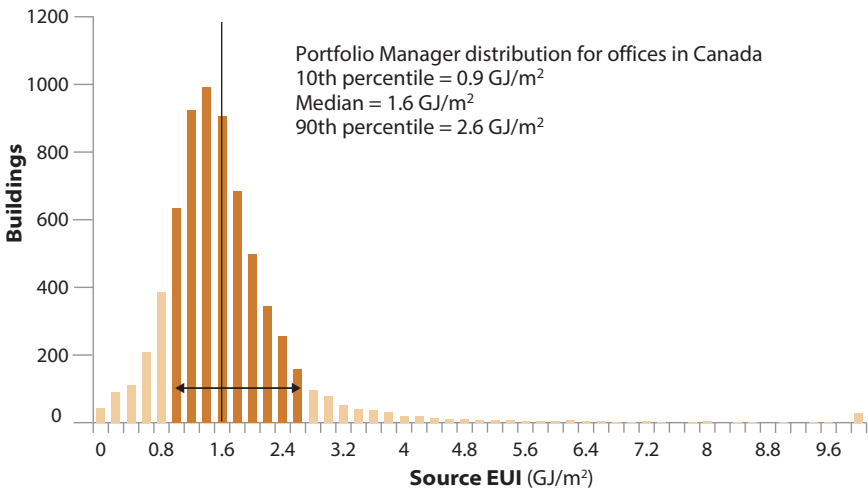


Table 2. Characteristics of offices – range of values			
Building characteristics	10th percentile	Median	90th percentile
Gross floor area (m ²)	685	9,500	52,050
Heating degree days	2,910	4,000	5,610
Cooling degree days	30	215	435
Weekly hours	45	65	67.5
Worker on main shift per 100 m ²	1.8	2.5	4.8

Figure 3. Distribution of floor area and buildings

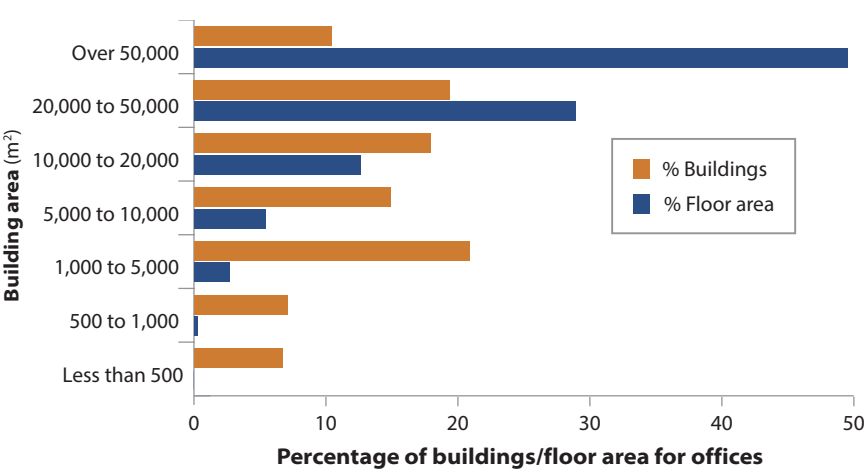
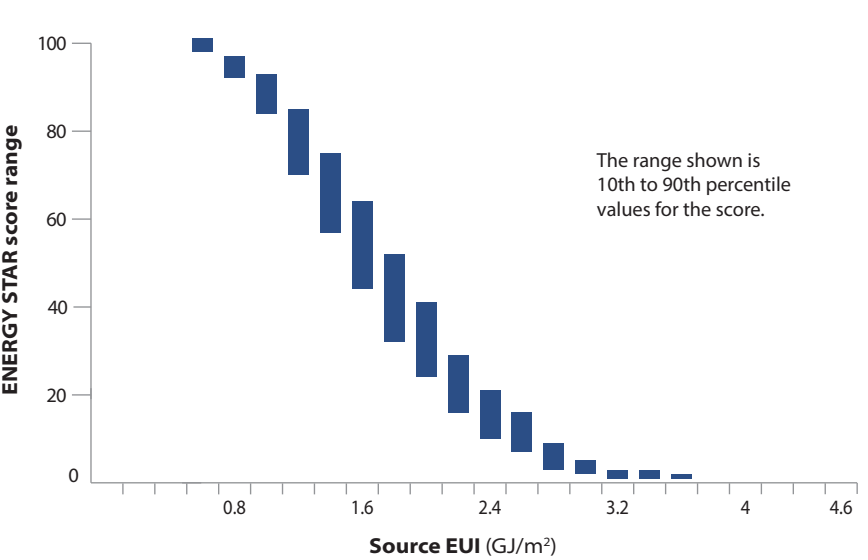


Figure 4. ENERGY STAR score range – offices



Source EUI distribution

The median source EUI for offices in ENERGY STAR Portfolio Manager is 1.6 GJ/m².

Characteristics

The buildings in Table 2 represent 44% of the floor area and 28% of buildings registered in Portfolio Manager in Canada.

Distribution of floor area and buildings

Figure 3 shows that larger buildings represent a relatively small portion of the number of buildings but account for almost half of the floor area benchmarked for offices in Portfolio Manager. The average gross floor area is 20,500 m², and the median is 9,500 m².

ENERGY STAR score ranges

Figure 4 shows the range (10th to 90th percentile) of ENERGY STAR scores given per source EUI range.

METRICS AND ACRONYMS

ENERGY USE INTENSITY (EUI)

EUI is the energy use per square metre at a property. EUI enables you to compare different size buildings.

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, source energy is a more accurate measurement 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, cases that are used for testing purposes, and an additional filter was applied. Variations from previous snapshots are possible because of changes in user entry, improved filtering, and data cleaning. 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 nrcan.buildings-batiments.rncan@canada.ca.

