



Canadian Energy Use Intensity by Property Type

OVERVIEW

This reference table is designed to help you to compare your property's energy use to the national median (or mid-point) energy use of similar properties.

Benchmarking your Property

When benchmarking in Portfolio Manager, we recommend that you focus on the primary function (or main activity) in your building(s). Begin by selecting your primary function from the table below and then enter as few additional use types as possible. Benchmarking your building using a single use type will most closely approximate how your building would have been recorded in the reference data survey, and therefore yield the most accurate comparisons to median performance. In some cases, buildings may have multiple distinctly different uses. For example, an office and a hotel that share a common building. In these mixed-use settings, it is appropriate to enter multiple use types. Definitions of all property types are available at: www.energystar.gov/PMGlossary.

Using Median Site and Source Energy Use Intensity (EUI)

The **national median source EUI** is a recommended benchmark metric for all buildings. The median value is the middle of the national population – half of buildings use more energy, half use less. The median works better than the mean (arithmetic average) for comparing relative energy performance, because it more accurately reflects the mid-point of energy use for most property types.

The table presents the median in both **site EUI** and **source EUI**. Site EUI is what you may be familiar with from your utility bills. Site EUI contains a mixture of what is called primary energy (i.e., a raw fuel like natural gas) and secondary energy (i.e., a converted product like electricity or district steam). Source energy provides the most equitable way to combine primary and secondary energy types into a single common unit, ensuring that no building receives either a credit or a penalty based on its energy source or utility. You can learn more about source energy and the way it is computed at www.energystar.gov/SourceEnergy. We strongly encourage you to use source EUI.

While almost all commercial building types have a national Median Source EUI, some (**presented in cyan with an asterisk**) will also have a 1-100 ENERGY STAR Score. The score evaluates a building relative to its peers, similar to the median energy use values, and also adjusts for climate and business activity. You can learn more about the score at: www.energystar.gov/ENERGYSTARScore.

Understanding Reference Data

The right-most column in the table indicates the reference data source we use to determine the median performance for your peer group. Primarily, we reference two surveys performed by Statistics Canada:

- Survey on Commercial and Institutional Energy Use – 2009 (SCIEU)
http://oee.nrcan.gc.ca/publications/statistics/scieu09/scieu_e.pdf
- Commercial and Institutional Building Energy Use Survey - 2000 (CIBEUS)
http://oee.nrcan.gc.ca/corporate/statistics/neud/dpa/data_e/CIBEUS_ENG.pdf

In addition, for two property types, U.S. survey data is referenced because there is no equivalent survey data for Canada. For Data Centers, EPA led a data collection project with industry groups to collect a representative survey. For Water and Wastewater Treatment Plants, the American Waterworks Association (AWWA) conducted a national survey of facilities.

Canadian National Median Reference Values for All Portfolio Manager Property Types

Broad Category	Primary Function	Further Breakdown (where needed)	Source EUI (GJ/m ²)	Site EUI (GJ/m ²)	Reference Data Source – Peer Group Comparison
Banking / Financial Services	Bank Branch		1.31	0.91	SCIEU – Offices
	Financial Office*				
Education	Adult Education		1.44	1.18	CIBEUS – Adult Education and Business School
	College / University		1.56	0.76	CIBEUS – Cégep, College and University
	K-12 School*		1.03	0.72	SCIEU – Primary and High Schools
	Pre-school / Daycare		1.27	0.92	CIBEUS – Daycare and Preschool
	Vocational School		1.44	1.18	CIBEUS – Adult Education and Business School
	Other – Education		1.27	0.92	CIBEUS – Education
Entertainment / Public Assembly	Convention Center		2.47	1.74	CIBEUS – Public Assembly excluding Public Worship Buildings
	Movie Theater		1.63	0.93	CIBEUS – Casino, Movie and Night Club
	Museum		2.47	1.74	CIBEUS – Public Assembly excluding Public Worship Buildings
	Performing Arts				
	Recreation	Bowling Alley	1.93	1.51	CIBEUS – Pool, Skating Rink, Fitness Centre and Bowling
		Fitness Center / Health Club / Gym			
		Ice / Curling Rink			
		Roller Rink			
		Swimming Pool			
		Other – Recreation	1.91	1.11	CIBEUS – Entertainment and Recreation
	Social / Meeting Hall		2.47	1.74	CIBEUS – Public Assembly excluding Public Worship Buildings

Broad Category	Primary Function	Further Breakdown (where needed)	Source EUI (GJ/m ²)	Site EUI (GJ/m ²)	Reference Data Source – Peer Group Comparison
Entertainment / Public Assembly	Stadium	Indoor Arena	1.93	1.51	CIBEUS – Pool, Skating Rink, Fitness Centre and Bowling
		Race Track	1.91	1.11	CIBEUS – Entertainment and Recreation
		Stadium (Closed)	1.93	1.51	CIBEUS – Pool, Skating Rink, Fitness Centre and Bowling
		Stadium (Open)			
		Other – Stadium			
	Other	Aquarium	2.47	1.74	CIBEUS – Public Assembly excluding Public Worship Buildings
		Bar / Nightclub	1.63	0.93	CIBEUS – Casino, Movie and Night Club
		Casino			
		Zoo	2.47	1.74	CIBEUS – Public Assembly excluding Public Worship Buildings
		Other – Entertainment / Public Assembly			
Food Sales & Service	Convenience Store	Convenience Store with Gas Station*	5.16	3.13	SCIEU – Food and Beverage Sales
		Convenience Store without Gas Station*			
	Restaurant/Bar	Bar / Nightclub	1.63	0.93	CIBEUS – Casino, Movie and Night Club
		Fast Food Restaurant	4.21	3.05	CIBEUS – Take-out, Restaurants and Food Services
		Restaurant			
		Other – Restaurant / Bar			
	Supermarket / Grocery Store*		5.16	3.13	SCIEU – Food and Beverage Sales
	Wholesale Club / Supercenter		1.52	0.85	SCIEU – Retail (Standalone)
	Other	Food Sales*	5.16	3.13	SCIEU – Food and Beverage Sales
		Food Service	4.21	3.05	CIBEUS – Take-out, Restaurants and Food Services

Broad Category	Primary Function	Further Breakdown (where needed)	Source EUI (GJ/m ²)	Site EUI (GJ/m ²)	Reference Data Source – Peer Group Comparison
Healthcare	Ambulatory Surgical Center		1.50	1.02	CIBEUS – Out Patient Care
	Hospital	Hospital (General Medical & Surgical)*	3.12	2.30	SCIEU – Hospitals
		Other / Specialty Hospital			
	Medical Office*		1.46	0.98	SCIEU – Medical Offices
	Outpatient Rehabilitation / Physical Therapy		1.50	1.02	CIBEUS – Out Patient Care
	Residential Care Facility*		1.94	1.12	SCIEU - Nursing and Residential Care
	Senior Care Community*		1.94	1.12	SCIEU - Nursing and Residential Care
	Urgent Care / Clinic / Other Outpatient		1.50	1.02	CIBEUS – Out Patient Care
Lodging / Residential	Barracks		2.05	1.45	CIBEUS – Accommodation
	Hotel		1.75	1.12	SCIEU – Hotel and Motel
	Multifamily Housing		N/A	N/A	NA
	Prison / Incarceration		1.74	1.28	CIBEUS – Public Order and Safety
	Residence Hall / Dormitory		2.05	1.45	CIBEUS – Accommodation
	Residential Care Facility*		1.94	1.12	SCIEU – Nursing and Residential Care
	Senior Care Community*		1.94	1.12	SCIEU – Nursing and Residential Care
	Single Family Home		N/A	N/A	NA
	Other – Lodging / Residential		1.75	1.12	SCIEU – Hotel and Motel
Manufacturing / Industrial	Manufacturing / Industrial Plant		N/A	N/A	NA
Mixed Use	Mixed Use Property		1.23	0.90	SCIEU – Other
Office	Medical Office*		1.46	0.98	SCIEU – Medical Offices
	Office*		1.31	0.91	SCIEU – Offices

Broad Category	Primary Function	Further Breakdown (where needed)	Source EUI (GJ/m ²)	Site EUI (GJ/m ²)	Reference Data Source – Peer Group Comparison
	Veterinary Office		1.50	1.02	CIBEUS – Out Patient Care
Parking	Parking		N/A	N/A	NA
Public Services	Courthouse		1.74	1.28	CIBEUS – Public Order and Safety
	Drinking Water Treatment & Distribution (Average EUI presented in Energy per Flow in cubic meters per day)		1.84	0.63	AWWA – Water Treatment Plant
	Fire Station		1.63	1.23	CIBEUS – Municipal Administration
	Library		2.47	1.74	CIBEUS – Public Assembly excluding Public Worship Buildings
	Mailing Center / Post Office		1.67	1.37	CIBEUS – Public Administration
	Police Station		1.74	1.28	CIBEUS – Public Order and Safety
	Prison / Incarceration				
	Social / Meeting Hall		2.47	1.74	CIBEUS – Public Assembly excluding Public Worship Buildings
	Transportation Terminal / Station		1.42	1.06	CIBEUS – Transportation Maintenance Facilities
	Wastewater Treatment Plant (Average EUI presented in Energy per Flow in cubic meters per day)		2.33	0.80	AWWA – Wastewater Plant
	Other – Public Services		1.23	0.90	SCIEU – Other
Religious Worship	Worship Facility		1.06	0.86	CIBEUS – Public Worship Buildings
Retail	Automobile Dealership		1.52	0.85	SCIEU – Retail (Standalone)
	Convenience Store	Convenience Store with Gas Station*	5.16	3.13	SCIEU – Food and Beverage Sales
		Convenience Store without Gas Station*			
	Mall	Enclosed Mall	3.47	2.10	SCIEU – Retail (Enclosed Malls)
		Lifestyle Center	2.24	1.38	SCIEU – Retail (Strip Malls)
		Strip Mall			
		Other – Mall	3.47	2.10	SCIEU – Retail (Enclosed Malls)

Broad Category	Primary Function	Further Breakdown (where needed)	Source EUI (GJ/m ²)	Site EUI (GJ/m ²)	Reference Data Source – Peer Group Comparison
	Retail Store		1.52	0.85	SCIEU – Retail (Standalone)
	Supermarket / Grocery Store*		5.16	3.13	SCIEU – Food and Beverage Sales
	Wholesale Club / Supercenter		1.52	0.85	SCIEU – Retail (Standalone)
Technology / Science	Data Center <i>(Average PUE presented in place of EUI: PUE = Total Energy/IT Energy)</i>		1.82	1.82	EPA – Data Center
	Laboratory		1.23	0.90	SCIEU – Other
	Other – Technology / Science				
Services	Data Center <i>(Average PUE presented in place of EUI: PUE = Total Energy/IT Energy)</i>		1.82	1.82	EPA – Data Center
	Personal Services (Health / Beauty, Dry Cleaning, etc.)		1.37	1.00	CIBEUS – Non-food services
	Repair Services (Vehicle, Shoe, Locksmith, etc.)				
	Other – Services		2.20	1.37	CIBEUS – Services
Utility	Drinking Water Treatment & Distribution <i>(Average EUI presented in Energy per Flow in cubic meters per day)</i>		1.84	0.63	AWWA – Water Treatment Plant
	Energy / Power Station		1.23	0.90	SCIEU – Other
	Wastewater Treatment Plant <i>(Average EUI presented in Energy per Flow in cubic meters per day)</i>		2.33	0.80	AWWA – Wastewater Plant
	Other – Utility		1.23	0.90	SCIEU – Other
Warehouse / Storage	Self-Storage Facility		0.93	0.75	SCIEU – Non-refrigerated Warehouse
	Warehouse / Distribution Center	Distribution Center			
		Non-Refrigerated Warehouse			
Other	Other		1.23	0.90	SCIEU – Other