

15 | GLOSSARY OF TERMS

Biomass:

Vegetation, sewage, or agricultural waste used as a fuel or energy source.

Blower Door Test:

A test that measures airtightness in homes and small buildings. It can also be used to find the location of major air leaks. The equipment for the test includes: 1) A temporary door covering installed in an outside doorway; 2) A fan that forces air into or out of the building; 3) A pressure measurement instrument called a Manometer to measure the pressure difference across the fan and the building envelope.

BuiltGreen:

A third-party green building rating system for houses and multi-family buildings administered in collaboration with the Canadian Home Builders' Association. BuiltGreen homes must be built by BuiltGreen-qualified builders.

Carbon Footprint:

The amount of carbon dioxide and other greenhouse gases emitted into the atmosphere from human activities such as the consumption of fossil fuels. In buildings, carbon is typically emitted from heating, cooling, electricity use (if the electricity is generated by fossil fuels), and hot water use.

Climate Change Mitigation:

Actions taken to reduce greenhouse gas emissions. Reducing greenhouse gas emissions is expected to slow global temperature increases.

Condominium:

A multi-family building in which the suites in the building are individually

owned and the owners pay a monthly fee to cover the operating costs of the building.

Drain-Water Heat Recovery:

The use of a heat exchanger to recover energy and reuse drain-water heat from various activities such as dishwashing, clothes washing, and especially showers. The technology reduces energy consumption for water heating and is also known as water heat recycling, drain-line heat exchange, or grey-water heat recovery.

Ecological Footprint:

A measure of the amount of biologically productive land necessary to supply the resources a human population consumes, and to absorb the associated waste.

EnerGuide:

The official Government of Canada mark associated with the labeling and rating of the energy consumption or energy efficiency of specific products. EnerGuide labeling exists for appliances, heating and cooling equipment, houses, and vehicles.

Energy Rating (ER) for Windows:

The energy rating (ER) value is calculated using a formula that balances a product's U-value with its potential solar heat gain coefficient (SHGC) and its airtightness. The higher the number, the more energy-efficient the product. ER values normally range from 0 to 50.

ENERGY STAR:

The international symbol of premium energy efficiency. Products that display the ENERGY STAR symbol

have been tested according to prescribed procedures and have been found to meet or exceed higher energy efficiency levels without compromising performance.

Geoexchange:

Low-temperature earth energy commonly used for heating and cooling a building with a heat pump. The stable temperature of the earth just below the surface can be used as a heat source or sink to generate free earth-energy for a building.

Geothermal Energy:

Energy derived from the heat in the interior of the earth.

Greenhouse Effect:

The earth's atmosphere acts somewhat like the glass of a greenhouse. Some incoming radiation from the sun is reflected directly back to space by the earth's atmosphere and surface, and some is absorbed by the atmosphere. The rest of the incoming radiation is absorbed by the earth's oceans and land, where it's converted into heat, warming the surface of the earth and the air above it. Particular gases in the atmosphere act like the glass of a greenhouse, preventing the heat from escaping. Without this natural greenhouse effect, the earth would be much colder – about 33 C colder – making the average temperature on the planet a freezing -18 C rather than the 15 C it is now.

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Greenhouse Gases (GHGs):

Any of the gases whose absorption of solar radiation is responsible for the greenhouse effect, including carbon dioxide, methane, ozone, and the fluorocarbons.

Ground-Source Heat Pump (GSHP):

A central heating and/or cooling system that pumps heat to or from the ground. It uses the earth as a heat source in the winter, or a heat sink in the summer. This design takes advantage of the moderate temperatures in the ground to boost efficiency and reduce the operational costs of heating and cooling systems. Also known as a geexchange system.

Heat Recovery Ventilator (HRV):

A fully ducted system that delivers fresh-filtered air from outside the house to the living room and bedrooms, and extracts stale air from high-moisture areas such as bathrooms, kitchens, and laundries.

Hydronic Heating:

A heating system that transfers heat by circulating a fluid through a closed system of pipes.

Leadership in Energy and Environmental Design (LEED):

A third-party certification program and an internationally accepted benchmark for the design, construction, and operation of high-performance green buildings, homes, and neighborhoods. The program is administered in Canada by the Canada Green Building Council (CaGBC).

Location Efficiency:

A term that describes how easily you can access work, shopping, entertainment, parks, and other amenities from your home, either by walking or through the use of transit. If the location of your home results in easier walks, shorter car trips, and faster access to transit, it's generally considered a more efficient location.

Low-Emissivity (Low-E) Coating:

The coating put on glass to reduce its thermal (heat) emissivity (loss). Low-E-coated windows can provide greater thermal efficiency (insulation properties) than regular windows.

Multi-Family Building:

Under the EnerGuide program, a multi-family building is defined as any building that has 4 or more levels or storeys, and where 50% or more of the floor area is residential.

Net-Zero Home:

A home that produces at least as much energy on-site from a renewable source as it uses on an annual basis.

Passive Design:

Passive design is key to green building design. It's an approach that maximizes the use of free, renewable sources of energy such as sun and wind to provide household heating, cooling, ventilation, and lighting. This reduces or removes the need for mechanical heating or cooling. Using passive design can reduce temperature changes, improve indoor air quality, and make a home drier and more enjoyable to live in. (Passive design is also called passive solar design.)

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Photovoltaic (PV) Panels:

Specially designed panels that convert solar energy into electricity, as an alternative to getting power from the electrical utility grid. Also called solar panels.

R-2000:

Operated by the Natural Resources Canada (NRCAN) Office of Energy Efficiency, R-2000 is a voluntary standard for new homes which demands a high level of energy efficiency, typically beyond what building codes require.

RSI:

R-value, which stands for "resistance value," provides a means for quantifying the thermal resistance of an insulating material. If the R-value is high, the material is a good thermal insulator, and heat will not easily flow through it. If the R-value is low, the material is a poor insulator. RSI stands for "R-value Système International," meaning it measures the same quantity but uses the international metric system of units. Converting one to the other requires some simple math. **R-value** (US) = **RSI** 5.678263337 or **RSI** (SI) = **R-value** 0.1761101838



R-Value (Insulation):

A measure of thermal resistance used in the building and construction industry. Thermal resistance is a measure of a temperature difference by which an object or material resists a heat flow. Therefore, the higher the R-value, the more effectively the insulation resists the transfer of heat (less heat escapes your home in the winter, and less heat enters your home in the summer).

Single-Family Home:

Under the EnerGuide program, a single-family home includes the following building types: Fully detached house, duplex, triplex, fourplex, row house, or low-rise multi-family building no more than 3 storeys high and in which over 50% of the floor area is residential.

Solar Gain:

The increase in temperature in a space, object, or structure that results from solar radiation. The amount of solar gain increases with the strength of the sun, and with the ability of any intervening material to transmit or resist the solar rays. This concept is also referred to as solar heat gain or passive solar gain.

Solar Heat Gain Coefficient (SHGC):

The number to know when selecting windows, doors, and skylights. It's a measure of how much of the sun's heat is transmitted through those fixtures, expressed in a number from 0 to 1. A window that has a SHGC of 0.3 allows 30% of the sun's heat to pass through. Whether you want a higher or lower number depends on your goal: A product with a low SHGC helps block heat and reduce cooling loads in hot weather; a product with a high SHGC is more effective at harnessing solar heat in cold weather.

U-Value:

The heat transfer coefficient that describes how well a building element conducts heat. It measures the rate of heat transfer through a building element over a given area under standardized conditions. The usual standard is at a temperature gradient of 24 C, at 50% humidity, with no wind. A smaller U-value is better at reducing heat transfer. A value of 0.33 is a good benchmark for a double-paned, argon-filled window.

Walk Score:

A large-scale, public access walkability index that assigns a numerical walkability score to any address in Canada. The final score gives you a general idea of how walkable your area is by analyzing how close common, everyday amenities like grocery stores, transit stops, shopping malls, etc. are to your home.

Window-To-Wall Ratio:

The proportion of the building facade area that has glass compared to solid wall provides a benchmark of the thermal performance of the building envelope as a whole. Generally, the larger the window area, the more energy that's required to heat the building.

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