

# HOMEOWNER INFORMATION SHEET

# ENERGUIDE

Your EnerGuide® rating and this report are based on data collected and, where necessary, presumed from your evaluation. Rating calculations are made using standard operating conditions.



**Rating: 70** gigajoules per year (GJ/year)

Heated floor area: 284.5 m<sup>2</sup> (3062.3 ft<sup>2</sup>)

Rated energy intensity: 0.25 GJ/m<sup>2</sup>/year

Evaluated by: Brooke Gallupe

Quality assured by: City Green Solutions

File number: 7926N00450

Data collected: November 21, 2020

Year built: 2020

[NRCan.gc.ca/myenerguide](http://NRCan.gc.ca/myenerguide)

## HOW YOUR RATING IS CALCULATED:

- I. Rated annual energy consumption 70 GJ/year
  - II. Minus renewable energy contribution - 0 GJ/year
  - = 70 GJ/year**
- Equals your **EnerGuide rating**

I. Your rated annual energy consumption is the total amount of energy your building would use in a year based on the EnerGuide Rating System standard operating conditions. For your building, this includes 22.25 GJ of passive solar gain.

Energy Sources	Rated Consumption (GJ/year)	Equivalent Units (per year)	Greenhouse Gas Emissions (tonnes/year)
Electricity	58	16023 kWh	0.2
Natural gas	12	334 m <sup>3</sup>	0.6
<b>Total</b>	<b>70</b>		<b>0.8</b>

II. On-site renewable power generation systems can offset some or even all of your energy consumption. Renewable energy contributions are factored differently for your rating and your greenhouse gas emissions calculations.<sup>1</sup>

On-Site Renewable Energy	Estimated Contribution (GJ/year)	Equivalent Units (per year)	Offset Greenhouse Gas Emissions (tonnes/year)
Electricity	0	0 kWh	0.0
Solar water heating	0	0 kWh	0.0
<b>Total</b>	<b>0</b>		<b>0.0</b>

## HOW YOUR CONSUMPTION COMPARES:

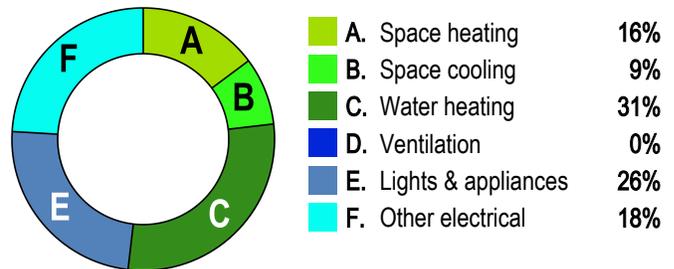
Compared to a typical new building, your building uses:

25.5% less energy;

37.3% less energy, when excluding the estimated energy consumption of lighting, appliances and electronics.

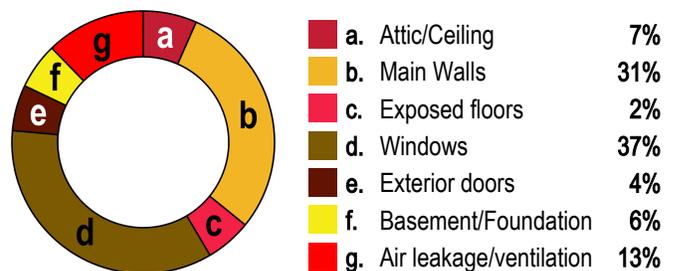
## HOW YOUR RATED ENERGY IS USED:

The chart below represents the breakdown of rated annual energy consumption in your building under standard operating conditions. You can use these figures as a guide to help identify where you can lower energy costs through proper maintenance, efficient operation, energy efficiency renovations or equipment replacement.



## WHERE YOUR BUILDING LOSES HEAT:

Buildings lose heat through their exterior shell, or building envelope. The chart below shows where and how your building loses heat. The quality and upkeep of your building can have a major impact on the amount of energy your heating and cooling systems use annually.



\*EnerGuide is an official mark of Natural Resources Canada. Refer to the glossary section for an explanation of relevant terms.

# BUILDING DETAILS

## BUILDING ENVELOPE

### ATTIC/CEILING

TYPE	INSULATION VALUE		AREA m <sup>2</sup> (ft <sup>2</sup> )
	Nominal RSI (R)	Effective RSI (R)	
Attic: Attic/gable	7.04 (40.0)	6.69 (38.0)	158.5 (1706)

### MAIN WALLS

TYPE	INSULATION VALUE		AREA m <sup>2</sup> (ft <sup>2</sup> )
	Nominal RSI (R)	Effective RSI (R)	
Main garage: 38x140 mm (2x6 in) Wood frame	3.24 (18.4)	2.81 (16.0)	29.7 (320)
Main exterior: 38x140 mm (2x6 in) Wood frame	3.24 (18.4)	3.04 (17.2)	125.4 (1350)
Upper exterior: 38x140 mm (2x6 in) Wood frame	3.24 (18.4)	2.94 (16.7)	134.5 (1448)

### EXPOSED FLOORS

TYPE	INSULATION VALUE		AREA m <sup>2</sup> (ft <sup>2</sup> )
	Nominal RSI (R)	Effective RSI (R)	
Floor: Exp Floor OH	4.93 (28.0)	5.05 (28.7)	9.7 (104)
Floor: Exp Floor garage	4.93 (28.0)	4.97 (28.2)	23.7 (255)

### WINDOWS

#	TYPE	U-factor W/m <sup>2</sup> · °C (Btu/h · ft <sup>2</sup> · °F)	RSI (R)
2	Vinyl, Fixed, Double, Low E	2.5 (0.44)	0.40 (2.3)
2	Vinyl, Fixed, Double, Low E	2.4 (0.42)	0.42 (2.4)
1	Vinyl, Slider, Double, Low E	2.4 (0.42)	0.42 (2.4)
2	Vinyl, Hinged, Double, Low E	2.4 (0.42)	0.42 (2.4)
2	Vinyl, Slider, Double, Low E	2.3 (0.4)	0.44 (2.5)
4	Vinyl, Fixed, Double, Low E	2.3 (0.4)	0.44 (2.5)
4	Vinyl, Slider, Double, Low E	2.2 (0.39)	0.45 (2.5)
3	Vinyl, Fixed, Double, Low E	2.2 (0.39)	0.45 (2.6)
2	Vinyl, Slider, Double, Low E	2.2 (0.39)	0.46 (2.6)
1	Vinyl, Fixed, Double, Low E	2.2 (0.38)	0.46 (2.6)
1	Vinyl, Slider, Double, Low E	2.1 (0.37)	0.47 (2.7)
4	Vinyl, Fixed, Double, Low E	2.1 (0.37)	0.47 (2.7)
1	Vinyl, Fixed, Double, Low E	2.1 (0.36)	0.48 (2.8)
1	Vinyl, Slider, Double, Low E	2 (0.35)	0.50 (2.8)
1	Vinyl, Fixed, Double, Low E	2 (0.35)	0.50 (2.8)
1	Vinyl, Fixed, Double, Low E	2 (0.34)	0.51 (2.9)
Total window area: 45.77 m <sup>2</sup> (492.6 ft <sup>2</sup> )			

### EXTERIOR DOORS

#	TYPE	U-factor W/m <sup>2</sup> · °C (Btu/h · ft <sup>2</sup> · °F)	RSI (R)
2	Solid wood	2.6 (0.45)	0.39 (2.2)
1	Fibreglass medium density spray foam core	1 (0.18)	0.98 (5.6)
2	Steel medium density spray foam core	0.9 (0.15)	1.14 (6.5)
Total door area: 9.99 m <sup>2</sup> (107.6 ft <sup>2</sup> )			

### BASEMENT/FOUNDATION

TYPE	INSULATION VALUE		AREA m <sup>2</sup> (ft <sup>2</sup> )
	Nominal RSI (R)	Effective RSI (R)	
Crawl space header header	3.50 (19.9)	3.69 (20.9)	3 (33)
Crawlspace Floor above crawlspace	N/A	0.73 (4.1)	125.2 (1347)
Crawlspace slab	N/A	N/A	125.2 (1347)
Crawlspace walls	3.49 (19.8)	3.77 (21.0)	46 (495)

### AIRTIGHTNESS

Air leakage rate at 50 pascals	1.82 air changes/hour
Equivalent leakage area	684.1 cm <sup>2</sup> (106 in <sup>2</sup> )
Normalized leakage area	1 cm <sup>2</sup> /m <sup>2</sup> (1.5 in <sup>2</sup> /100 ft <sup>2</sup> )

## MECHANICAL SYSTEMS

Mechanical systems displayed may not reflect actual systems as some of them may have been combined for simulation purposes.

### SPACE HEATING

TYPE	OUTPUT SIZE	EFFICIENCY
Electric furnace	10.5 kW 36000 BTU/h	100% Steady State
Air-source heat pump	10.26 kW 35500 BTU/h	7.83HSPF
Natural gas fireplace	3.81 kW 13000 BTU/h	59.5% Steady State
Design heating load: 9.18 kW – refer to glossary for details		

### SPACE COOLING

TYPE	OUTPUT SIZE	EFFICIENCY
Air-source heat pump	10.26 kW 35500 BTU/h	16 SEER
Design cooling load: 6.04 kW		

### WATER HEATING

TYPE	TANK VOLUME	EFFICIENCY
Natural gas tankless	N/A	0.82 EF
Electric storage tank	189L (50 USG)	0.82 EF

## BUILDING DETAILS

### PRINCIPAL VENTILATION

TYPE	AIR FLOW RATE	EFFICIENCY
N/A	N/A	N/A

### HEATED FLOOR AREA

Above-grade area	284.5 m <sup>2</sup> (3062 ft <sup>2</sup> )
Below-grade area	0 m <sup>2</sup> (0 ft <sup>2</sup> )

### WARNINGS



Your energy advisor found that there may be a risk of hazardous combustion fumes being drawn into your building. Please refer to *Combustion Gases in Your Home – Things You Should Know About Combustion Spillage* provided by your energy advisor and consult a qualified heating and ventilation contractor. Ensure you have a functioning carbon monoxide detector.

## GLOSSARY

### A typical new building

is a reference point on your label against which to compare your rating. It shows the estimated energy consumption of a building that is the same size, type and in the same location as yours. The typical new building is based on the energy efficiency requirements of the National Building Code.

### Airtightness

describes how well the building envelope resists air leakage and is measured in air changes per hour at 50 pascals (ACH@50 Pa). The fewer air changes per hour, the more airtight the building envelope is. Equivalent leakage area is another way of describing the airtightness of the building envelope. It represents the size of a single hole in your building envelope if all the individual air leakage holes or gaps were added together. The smaller the equivalent leakage area, the less energy you will need to control the temperature of your building (but you will still need to ensure that you have adequate ventilation).

### Design heating/cooling loads

provide an estimate of the capacity of the heating and cooling equipment needed to maintain your building at 22 °C in the winter and 24 °C in the summer and are provided for guidance only. Before having a new heating/cooling system installed, your heating/cooling contractor should perform an independent, detailed heat loss/heat gain calculation in order to select the appropriate equipment.

### Gigajoule (GJ)

is a unit of energy. It can be used as a measure of any type of energy that is consumed or produced. Specifically, one GJ is the equivalent of 278 kWh of electricity, 27m<sup>3</sup> of natural gas, 26 L of oil, 39 L of propane, or 947 817 BTUs. One GJ is roughly equal to the energy from two standard barbeque propane tanks or 30 litres of gas in a car's gas tank.

### Greenhouse gas emissions

are the amounts of carbon dioxide, methane and nitrous oxide that are produced directly, by burning fossil and solid fuels, or indirectly, through the production of electricity. Greenhouse gas emissions are expressed in carbon dioxide equivalent units. Greenhouse gas emissions are calculated by multiplying the quantity of fuel or electricity used in your building by the emission factors for the particular energy source. Electricity factors vary by province/territory because there are different emissions associated with the method used to produce electricity. One tonne of greenhouse gas emissions is equivalent to the CO<sub>2</sub> emissions produced by driving an average efficiency mid-size vehicle from Toronto to Vancouver.

### Heated floor area

represents the total useable area of your building that is heated, measured at the interior of the outer walls or of the walls attached to other buildings.

### Insulation values

are expressed in RSI (m<sup>2</sup> • °C/W) or R-value (h • ft<sup>2</sup> • °F/Btu) and represent the resistance to the flow of heat of a given thickness of insulation or construction assembly. The higher the RSI-value (R-value), the better the performance. The nominal value represents

the resistance to the flow of heat of just the insulation while the effective value represents the resistance to the flow of heat of the entire wall, ceiling or floor assembly considering the structure, insulation, framing, sheathing and all finishing.

### On-site renewable energy contributions

are subtracted from the rated annual energy consumption to calculate the EnerGuide rating. For the calculation of the rated greenhouse gas emissions, on-site electricity generation only offsets emissions associated with electricity consumption, whereas a solar water heater reduces the emissions that would have been produced from the source of energy used to heat water.

### Passive solar gain

is the heat from the sun that influences your building's heating and cooling requirements. Generally, south facing windows provide more solar gain.

### Rated energy intensity

is calculated by dividing your rated annual energy consumption by your building's heated floor area. It allows you to compare the annual energy use of buildings of different sizes on a "per square metre" basis.

### Standard operating conditions

have been used to calculate your building's EnerGuide Rating. The rating assumes a standard number of occupants and energy use patterns. This allows for comparison of energy use across buildings so that the building is rated and not its operation by the occupants. The values are:

- Two adults, at home 50% of the time;
- Hot water use of 103-129 L/unit/day, variable depending on incoming ground water temperature and year the house was built;
- Thermostat settings of 21°C for daytime heating, 18°C for nighttime heating and 25°C for cooling; and
- Lighting, appliance and other electrical loads of 11.7 kWh/day.

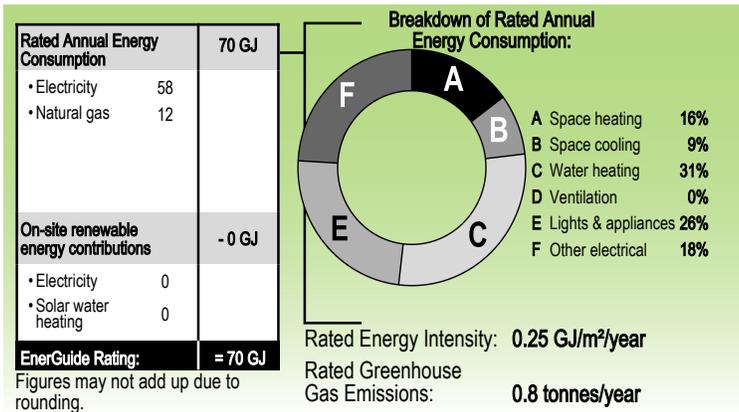
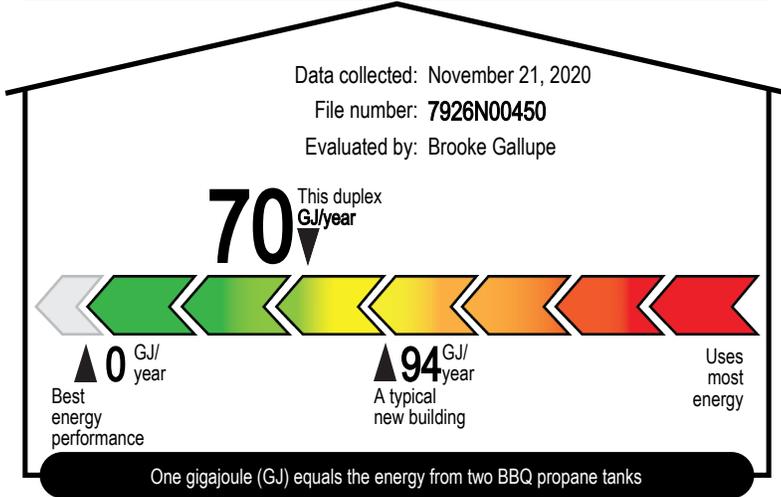
### U-factor

measures heat transferred through windows and doors, expressed in W/m<sup>2</sup> • °C (BTU/h • ft<sup>2</sup> • °F). The lower the U-factor, the better the energy efficiency of a window. The inverse of U-factor (1/U-factor) identifies the resistance to the flow of heat, expressed in RSI. The higher the RSI, the better the window is at resisting heat loss. You can use these values to choose more energy efficient windows.

For more details and additional terms, please visit [NRCan.gc.ca/myenergiguide](http://NRCan.gc.ca/myenergiguide).

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# ENERGUIDE



The energy consumption indicated on your utility bills may be higher or lower than your EnerGuide rating. This is because standard assumptions have been made regarding how many people live in your house and how the home is operated. Your rating is based on the condition of your house on the day it was evaluated.

**Quality assured by:** City Green Solutions

**Builder:** Langdon Weir Construction

Visit [NRCan.gc.ca/myenerguide](http://NRCan.gc.ca/myenergguide)



## NEXT STEPS

If you have had a Renovation Upgrade Service, refer to your report for the roadmap to making your building more energy efficient. If you have not yet had a Renovation Upgrade Service, why not contact your service organization to learn what you can do to save on energy costs, reduce greenhouse gas emissions and improve comfort?

Everyone uses energy in their building differently. This report was developed using standard operating conditions as explained in the glossary. Therefore, your EnerGuide rating will not match your utility bills.

## UPGRADE CONSIDERATIONS

Before undertaking upgrades or renovations, find out about appropriate products and installation techniques, and ensure that all renovations meet local building codes and by-laws. Natural Resources Canada does not endorse the services of any contractor, nor any specific product, and accepts no liability in the selection of materials, products, contractors nor performance of workmanship.

Where your energy advisor has identified a potential health or safety concern such as insufficient outdoor air, risk of combustion fumes entering your building or risk of exposure to asbestos, they have endeavoured to provide a warning in this report. However, energy advisors are not required to have expertise in health and safety matters, and building owners are solely responsible for consulting a qualified professional to determine potential hazards before undertaking any upgrades or renovations.

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