Address: 21 Birch Street, Chester, NOVA SCOTIA, B0J 1J0

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: 89 gigajoules per year (GJ/year)

Heated floor area: 168.3 m² (1811.6 ft²)
Rated energy intensity: 0.53 GJ/m²/year
Evaluated by: Steve Fairbairn
Quality assured by: Clean Foundation
File number: 2141D00621
Data collected: April 19, 2018
Year built: 1987

NRCan.gc.ca/myenerguide

HOW YOUR RATING IS CALCULATED:

I.	Rated annual energy consumption	89 GJ/year
II.	Minus renewable energy contribution	- 0 GJ/year
	Equals your **EnerGuide rating**	**= 89 GJ/year**

I. Your rated annual energy consumption is the total amount of energy your house would use in a year based on the EnerGuide Rating System standard operating conditions. For your house, this includes 12.9 GJ of passive solar gain.

Energy Sources	Rated Consumption (GJ/year)	Equivalent Units (per year)	Greenhouse Gas Emissions (tonnes/year)
Electricity	89	24683kWh	20.2
Total	89		20.2

II. On-site renewable power generation systems can offset some or even all of your home's energy consumption. Renewable energy contributions are factored differently for your rating and your greenhouse gas emissions calculations.[1]

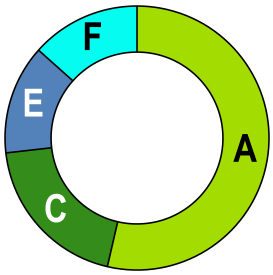
On-Site Renewable Energy	Estimated Contribution (GJ/year)	Equivalent Units (per year)	Offset Greenhouse Gas Emissions (tonnes/year)
Electricity	0	0 kWh	0.0
Solar water heating	0	0	0.0
Total	0		0.0

YOUR RATED GREENHOUSE GAS EMISSIONS CALCULATION:

Total greenhouse gas emissions	20.2 tonnes/year
Minus emissions offset by on-site renewables	- 0.0 tonnes/year
Equals your **rated greenhouse gas emissions**	**= 20.2 tonnes/year**

HOW YOUR RATED ENERGY IS USED:

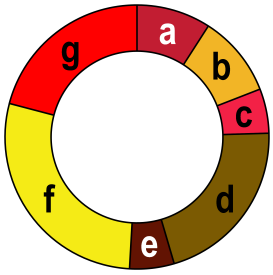
The chart below represents the breakdown of rated annual energy consumption in your home under standard operating conditions. You can use these figures as a guide to help identify where you can lower home energy costs through proper home maintenance, efficient home operation, energy efficiency renovations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



A.	Space heating	**52%**
B.	Space cooling	**0%**
C.	Water heating	**19%**
D.	Ventilation	**0%**
E.	Lights & appliances	**13%**
F.	Other electrical	**16%**

WHERE YOUR HOME LOSES HEAT:

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



a.	Attic/Ceiling	**10%**
b.	Main Walls	**11%**
c.	Exposed floors	**1%**
d.	Windows	**23%**
e.	Exterior doors	**1%**
f.	Basement/Foundation	**31%**
g.	Air leakage/ventilation	**23%**

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

HOUSE DETAILS

BUILDING ENVELOPE

ATTIC/CEILING

TYPE	INSULATION VALUE		AREA m² (ft²)
	Nominal RSI (R)	Effective RSI (R)	
Ceiling01: Attic/gable	3.52 (20.0)	3.67 (20.8)	87.8 (945)

MAIN WALLS

TYPE	INSULATION VALUE		AREA m² (ft²)
	Nominal RSI (R)	Effective RSI (R)	
Main floor: 38x140 mm (2x6 in) Wood frame	3.89 (22.1)	3.66 (20.8)	90.6 (975)

EXPOSED FLOORS

TYPE	INSULATION VALUE		AREA m² (ft²)
	Nominal RSI (R)	Effective RSI (R)	
Floor: Exp Floor-01	3.52 (20.0)	3.87 (21.9)	4.5 (48)

WINDOWS

#	TYPE	U-factor W/m² • °C (Btu/h • ft² • °F)	RSI (R)
10	Vinyl, Slider, Double, No low E	3 (1)	0.33 (1.9)
2	Vinyl, Fixed, Double, No low E	3 (1)	0.34 (1.9)
1	Wood, Slider, Double, No low E	2.9 (1)	0.34 (1.9)
1	Vinyl, Hinged, Double, Low E	2.2 (0)	0.44 (2.5)
1	Vinyl, Hinged, Double, Low E	2.2 (0)	0.45 (2.5)
1	Wood, Fixed, Double, Low E	2 (0)	0.49 (2.8)
Total window area: 16.51 m² (177.8 ft²)			

EXTERIOR DOORS

#	TYPE	U-factor W/m² • °C (Btu/h • ft² • °F)	RSI (R)
2	Steel polystyrene core	1 (0)	0.98 (5.6)
Total door area: 4.6 m² (50 ft²)			

BASEMENT/FOUNDATION

TYPE	INSULATION VALUE		AREA m² (ft²)
	Nominal RSI (R)	Effective RSI (R)	
Foundation - 1 Pony Wall(1)	4.66 (26.5)*	3.73 (21.0)*	33.1 (356)
Foundation - 1 Pony Wall(2)	5.51 (31.3)*	4.41 (25.0)*	12.2 (132)
Foundation - 1 Basement header	4.17 (23.7)	4.51 (25.6)	9.4 (101)
Foundation - 1 Interior (1)	0.62 (3.5)*	0.76 (4.0)*	57.8 (622)

BASEMENT/FOUNDATION (Continued)

TYPE	INSULATION VALUE		AREA m² (ft²)
	Nominal RSI (R)	Effective RSI (R)	
Foundation - 1 Interior (2)	0.81 (4.6)*	0.91 (5.0)*	23 (247)
Foundation - 1 Interior (3)	N/A*	N/A*	4.3 (46)
Foundation - 1 slab	N/A	0.10 (0.6)	80.5 (866)

*This is the average insulation value across several foundation sections.

AIRTIGHTNESS

Air leakage rate at 50 pascals	5.89 air changes / hour
Equivalent leakage area	932.9 cm² (145 in²)
Normalized leakage area	2.6 cm² / m² (3.8 in² /100 ft²)

MECHANICAL SYSTEMS

SPACE HEATING

TYPE	OUTPUT SIZE	EFFICIENCY
Electric baseboard	9.5 kW 32500 BTU/h	100% Steady State
Advanced airtight wood stove	21.69 kW 74500 BTU/h	30% Steady State
Design heating load: 8.55 kW		

SPACE COOLING

TYPE	OUTPUT SIZE	EFFICIENCY
N/A	N/A	N/A
Design cooling load: 4.35 kW		

WATER HEATING

TYPE	TANK VOLUME	EFFICIENCY
Electric storage tank	189L (50 USG)	0.82 EF

WHOLE-HOME VENTILATION

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

HEATED FLOOR AREA

Above-grade area	87.8 m² (945.1 ft²)
Below-grade area	80.5 m² (866 ft²)

GLOSSARY

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 home (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 home 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 on your home 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 in your home. Specifically, one GJ is the equivalent of 278 kWh of electricity, 27m³ 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 home by the emission factors for the particular energy source. Electricity factors vary by province because there are different emissions associated with each province's method of producing electricity. One tonne of greenhouse gas emissions is equivalent to the CO_2 emissions produced by driving an average efficiency mid-size vehicle from Toronto to Vancouver.

Heated floor area
represents the total useable area of your home 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 (m² • °C/W) or R-value (h • ft² • °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 home'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 home's heated floor area. It allows you to compare the annual energy use of homes of different sizes on a "per square metre" basis.

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

- Two adults and one child, at home 50% of the time;
- Hot water use of 178 - 199 L/day, variable depending on incoming ground water temperature;
- 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 19.5 kWh/day.

U-factor
measures heat transferred through windows and doors, expressed in W/m² • °C (BTU/h • ft² • °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/myenerguide.

21 Birch Street,
Chester, NOVA SCOTIA, B0J 1J0

ENERGUIDE

Data collected: April 19, 2018
File number: **2141D00621**
Evaluated by: Steve Fairbairn

89 This House GJ/year



0 GJ/year
Best energy performance

71 GJ/year
A typical new house

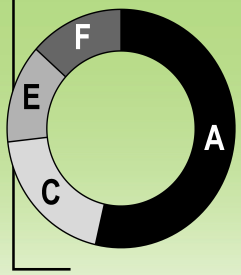
Uses most energy

One gigajoule (GJ) equals the energy from two BBQ propane tanks

Rated Annual Energy Consumption		89 GJ
• Electricity	89	
On-site renewable energy contributions		**- 0 GJ**
• Electricity	0	
• Solar water heating	0	
EnerGuide Rating:		**= 89 GJ**

Figures may not add up due to rounding.

Breakdown of Rated Annual Energy Consumption:



A	Space heating	52%
B	Space cooling	0%
C	Water heating	19%
D	Ventilation	0%
E	Lights & appliances	13%
F	Other electrical	16%

Rated Energy Intensity: **0.53 GJ/m²/year**

Rated Greenhouse Gas Emissions: **20.2 tonnes/year**

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: Clean Foundation

Visit NRCan.gc.ca/myenerguide

Natural Resources Canada | Ressources naturelles Canada | Canada

NEXT STEPS

If you have had a Renovation Upgrade Service, refer to your report for the roadmap to making your home 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 home comfort?

Everyone uses energy in their house 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 house 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 homeowners are solely responsible for consulting a qualified professional to determine potential hazards before undertaking any upgrades or renovations.

Visit us today at:

NRCan.gc.ca/myenerguide