

# ENERGUIDE

## Energy Efficiency Evaluation Report

Spencer Wiltshire, D.  
33 Rock Haven Green NW  
Calgary, Alberta  
T3G 0C5

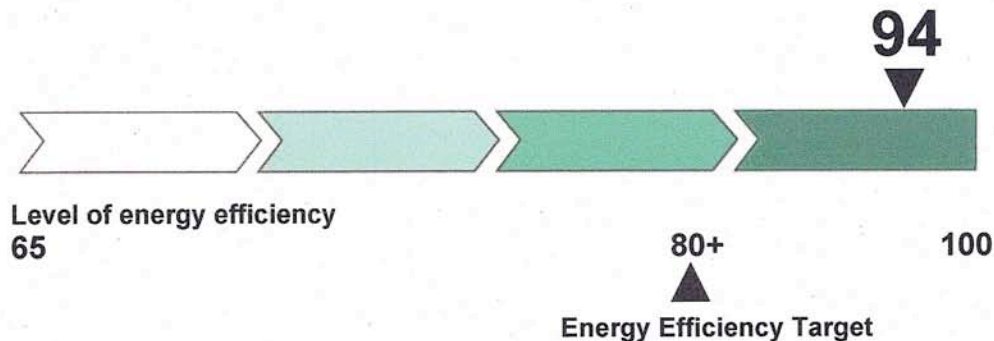
File Number: 5278N00052  
Year Built: 2010  
Date of Evaluation: Dec. 21, 2010  
Builder Name: H0000 Sunergy Systems Ltd.

### **Congratulations on the purchase of your new house!**

This report contains information on how your new house will consume energy. Anyone can claim that a house is energy efficient, but the EnerGuide label and this report shows how efficient your house is. Any energy efficiency upgrades that you and your builder decided to include in your house will reduce energy consumption for years to come and will help protect our environment.

### **Your House's Energy Efficiency Rating**

A qualified energy advisor has assessed the energy efficiency of your house by using Natural Resources Canada's EnerGuide Rating System procedures. **Based on this evaluation, your house has an energy efficiency rating of 94**



The EnerGuide scale ranges from 0 to 100. It accommodates millions of houses across Canada - from older houses in need of renovation to newer, more energy-efficient ones. A "0" on the scale would represent an uncomfortable house that has major air leakage, no insulation and extremely high-energy consumption. At the other end of the scale, "100" represents a house that is very well insulated, airtight yet well ventilated, and heated by renewable energy sources, such as wind or solar power. Several factors, such as the size of a home's windows and the direction they face, can affect the rating. Even if two houses appear identical, their ratings can be very different if they have different levels of insulation, types of heating equipment, etc.

For many older houses, meeting 65 or higher on the scale would be quite an achievement. New houses typically receive a rating of 65 or higher, simply because of improvements in building standards and practices over the years. Relatively few houses achieve a rating of 80 or higher, and those that do represent the most energy-efficient houses on the market. Therefore, the EnerGuide rating scale shown ranges from 65 to 100.

### **Typical Energy Efficiency Ratings**

### **Typical Rating**

New house built to building code standards .....	65 - 72
New house with some energy-efficiency improvements .....	73 - 79
Energy-efficient new house .....	80 - 90
House requiring little or no purchased energy .....	91 - 100

## Estimated Annual Energy Consumption

Below, you will find the estimated annual energy consumption of electricity, natural gas, propane or oil for your house. These estimates are based on a number of standard assumptions, such as a family of four living in the home, specific thermostat settings, and usage rates for hot water, lighting and appliances.

These assumptions may not reflect your lifestyle but, since they are the same for all houses, they allow you to compare your house's rating with similar-sized houses built in similar regions. The number of occupants and their day-to-day habits and overall lifestyle may significantly influence your house's actual energy consumption and your future savings.

This house, as currently rated, has an estimated annual energy consumption of 56 GJ\*.

\* One GJ is the amount of energy that would be consumed by a 100-Watt light bulb lit continuously for four months.

Table 1. Estimated Annual Energy Consumption

	Electricity (kilowatt-hours)	Natural Gas (cubic metres)	Oil (litres)	Propane (litres)	Total (gigajoules)
Current estimate	15667	0	0	0	56

### Did you know?

Today, 17 percent of all energy used in Canada goes toward running our homes. By using less energy in your home, you can help reduce the production of greenhouse gas (GHG) emissions that contribute to climate change and harm the environment. Your house produces 19.9 tonnes per year less GHGs than a similar house built to minimum building code requirements.



## Estimated Energy Consumption by End Use

All houses lose heat to the outdoors during the heating season through air leakage, ventilation (e.g. exhaust fans in bathrooms and kitchen) and the transfer of heat through the basement, walls, roof, windows and doors. Lost heat must be replaced by your main heating device (furnace, boiler, fireplace, etc.). This is called space heating. Generally, space heating, domestic hot water, and lights and appliances make up most of the energy consumption in a house.

Figure 1 shows the breakdown of space heating, domestic hot water, and lights and appliances for your house.

Figure 1. Energy Consumption Estimates by End Use

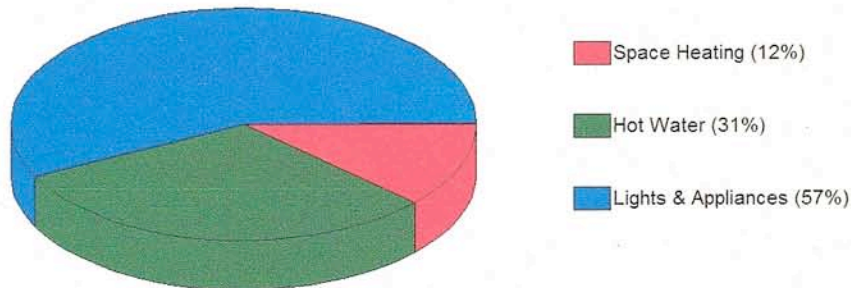
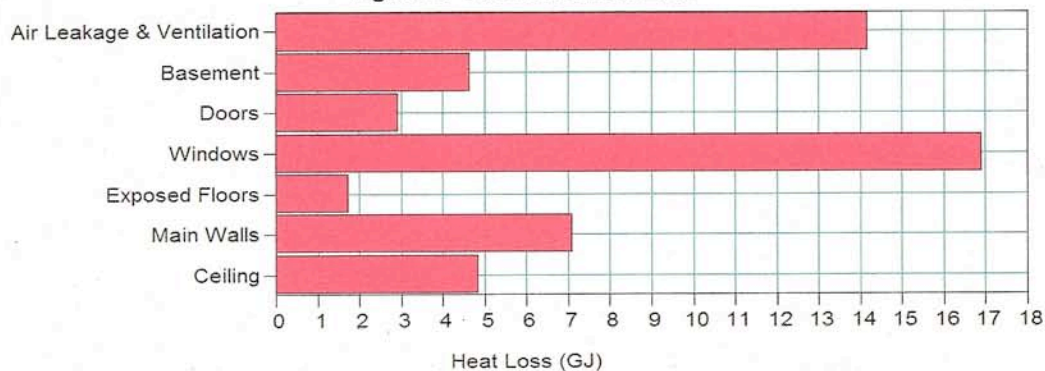


Figure 2 shows how the energy for the "space heating" segment shown in Figure 1 actually gets used in the heating of your home. A long bar indicates where your house will lose more heat; a short bar indicates where it will lose less heat. If you decide to renovate your home, look at the long bars on this graph and consider improving those areas.

Figure 2. Estimated Heat Loss



### Maintenance tip

The building envelope is made up of a house's exterior walls, basement, exposed floors, ceilings, windows, roofs and doors. As houses age in Canada's severe climate, tiny cracks open in the building envelope. Any future renovations you undertake may also affect your house's building envelope. Since increased air leakage through cracks or holes decreases your house's energy efficiency and the comfort of the occupants, keep this in mind over time so that you can protect your investment.

## Energy Saving and Maintenance Tips for Your New Home

Just like anything else you value, houses need to be maintained with care and repaired whenever problems appear. A well-maintained house will pay you back with reduced energy costs and greater comfort.

### Heating equipment

Have your space- and water-heating equipment serviced annually. If you have a forced-air heating system, clean or replace your furnace filter every month, or as required.

### Ventilation systems

If you have a heat recovery ventilation system, remember to clean the filter, core and grills regularly. Natural Resources Canada's publication entitled *Heat Recovery Ventilator* has a chapter on how to maintain it properly. You can call 1 800 387-2000 to order a free copy or visit [oee.nrcan.gc.ca/publications](http://oee.nrcan.gc.ca/publications) and look under "Heating and Cooling."

### Water heating

Lower your water-heater thermostat setting from to 55°C (130°F). It will save you money on your water-heating bill and help prevent accidental scalding.

### Energy-efficient lighting

When replacing lights, install energy-efficient lighting. Energy-efficient bulbs, such as ENERGY STAR® qualified compact fluorescents, last longer and reduce electricity consumption.

### Energy-efficient appliances, home electronics and office equipment

When purchasing appliances, home electronics and office equipment, look for those displaying the ENERGY STAR® mark, the international symbol for energy efficiency. An ENERGY STAR® labelled computer in "sleep" mode consumes about 80 percent less electricity than it does in full-power mode. ENERGY STAR® labelled home electronics equipment uses less than half as much energy in standby mode (i.e. when turned "off") - without sacrificing features you want. For more information, go to [energystar.gc.ca](http://energystar.gc.ca).

### Solar ready

Congratulations, your new home is Solar Ready! This means that your builder has installed two conduits from the mechanical room up to the attic and there is enough space on the roof for you to install solar panels (to provide domestic water heating and to generate electricity) in the future should you decide to do so. To learn more about Solar Ready and solar energy visit [www.newhomes.gc.ca](http://www.newhomes.gc.ca) or talk with your builder.





## Notice to Homeowner

Thank you for having your house examined by a qualified energy advisor working with the EnerGuide Rating System. The file number relating to the independent energy evaluation is indicated in this report and on the EnerGuide rating label provided by your builder.

The annual energy consumption figures indicated in Table 1 of this report and on the EnerGuide rating label are estimates only. They are based on a number of assumptions (listed on page 2 of this report) and depend on factors beyond the control of Natural Resources Canada (NRCan). NRCan makes no warranty, expressed or implied, with respect to the energy consumption figures included in this report.

The purpose of the EnerGuide Rating System is to assess the energy efficiency of new homes. It does not replace a home inspection.

The Government of Canada developed and financially supports the EnerGuide Rating System. This support helps service organizations provide the service to homeowners and homebuilders.

Service organization name: \_\_\_\_\_

Address: \_\_\_\_\_

Phone number: \_\_\_\_\_

Date of evaluation: December 21, 2010

House address: 33 Rock Haven Green NW, Calgary, AB

House file number: 5278N00052

### Personal Information Agreement:

Personal information collected in the course of the energy evaluation of your home will be protected under the *Privacy Act*. The data collected in the course of preparing this report have been provided to NRCan for the purposes of:

- NRCan's quality assurance\* and statistical analysis activities; and,
- enabling NRCan to confirm information on your home to other federal departments, provincial/territorial or municipal governments or utility companies which have an agreement in place with NRCan and are offering incentives based on the energy evaluation of your home.

\*Note: NRCan representatives may contact you during the quality assurance activities on the EnerGuide Rating System.

By signing below, I authorize NRCan to use my Personal Information in the manner outlined above:

*(please print)*

Homeowner name: \_\_\_\_\_

Phone number: \_\_\_\_\_

Signature: \_\_\_\_\_

*Note:* The information above must identify the name of the owner of the home at the time the final energy evaluation is performed. If the homeowner has not taken legal possession of the home from the builder by the date of the evaluation, the builder's authorized representative may complete this section.

## Home Builder Agreement

A qualified energy advisor working with the EnerGuide Rating System has examined the house at the address indicated below. The date and file number relating to the independent energy evaluation are indicated below.

By signing below, the builder commits to:

- providing the first owner of the house at the address given below with the EnerGuide rating label and report (pages 1-5) for this home; and
- having the "Notice to Homeowner" section of the report signed by the party who owns the home at the time of the final EnerGuide Rating System evaluation and ensuring that the service organization receives a copy of completed waivers.

The purpose of the EnerGuide Rating System is to assess the energy efficiency of new homes. It does not replace a home inspection.

The Government of Canada developed and financially supports the EnerGuide Rating System. This support helps service organizations to provide the service to homeowners and homebuilders.

Service organization  
name : \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone number: \_\_\_\_\_  
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By signing below, I authorize NRCan to use my Personal Information in the manner outlined above:

(please print)

Company name of  
builder: H0000 Sunergy Systems Ltd.  
Phone number: \_\_\_\_\_  
Address: \_\_\_\_\_

Name of builder representative signing below: \_\_\_\_\_

Builder representative signature: \_\_\_\_\_

*Note:* The information above must identify the name of the owner of the home at the time the final energy evaluation is performed. If the homeowner has not taken legal possession of the home from the builder by the date of the evaluation, the builder's authorized representative may complete this section.

EnerGuide is a trademark of Natural Resources Canada.

The ENERGY STAR® mark is administered and promoted in Canada by NRCan and is registered in Canada by the United States Environmental Protection Agency.



**HOUSE REPORT**

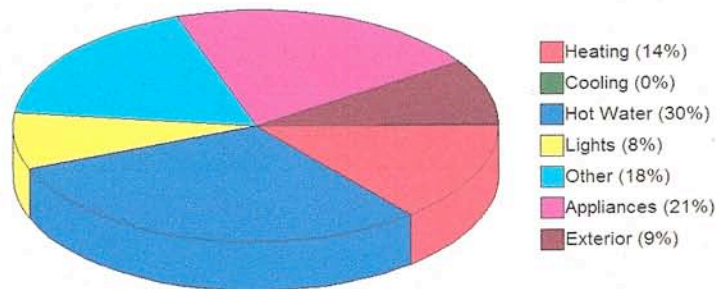
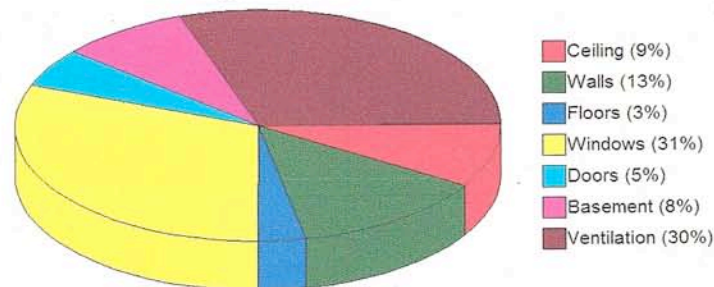
**HOT2000**  
Natural Resources CANADA  
Version



Client: **Spencer Wiltshire, D.**  
Address: **33 Rock Haven Green NW**  
City: **Calgary**  
Province: **Alberta**  
Code: **T3G 0C5**  
Phone: **403 213 3982**

Audit Date: **15/09/2010**  
Auditor: **Kim Walton**  
File ID: **5278P00052**

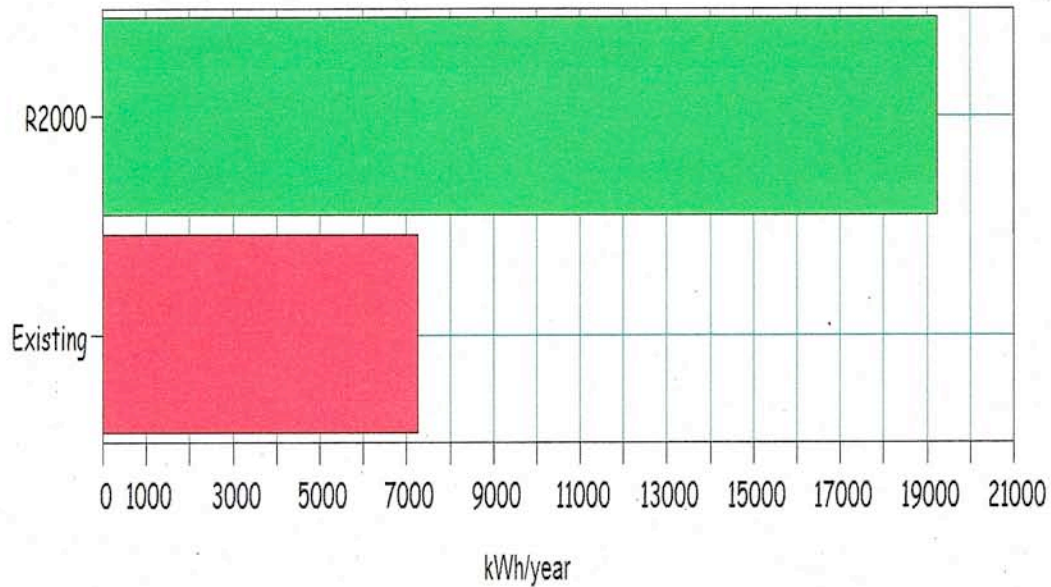
Your house was analysed using a computer program developed by Natural Resources Canada. The following charts show the components of yearly energy consumption and heat loss for your home.

**COMPONENTS OF ANNUAL ENERGY CONSUMPTION****COMPONENTS OF ANNUAL HEAT LOSS**



Your house currently uses approximately 7259.9 kWh for space and hot water heating in an average year. The following chart illustrates the relationship between the energy used by your house and the energy used by an equivalent R2000 home.

**ANNUAL HEATING + HOT WATER ENERGY CONSUMPTION (kWh)**



**Energy Rates**

The energy costs shown below are based on your home's estimated energy use and the average cost of the fuels used in your home at the time of inspection (average rates may change as consumption changes; equipment rental costs not included).

	Electricity		Natural Gas		Oil		Propane		Total	
	kWh	\$	cu. m	\$	L	\$	L	\$	GJ	\$
Current Estimate	16021	1055.36	0	0.00	0	0.00	0	0.00	58	1055
After Improvements	16021	1055.36	0	0.00	0	0.00	0	0.00	58	1055
Savings	0	0	0	0	0	0	0	0	0	0

Note: One gigajoule (GJ) is equal to the amount of energy that would be consumed by ten 100-Watt light bulbs over 12 days.

# ENERGY UPGRADE REPORT

**HOT2000**  
Natural Resources CANADA  
Version

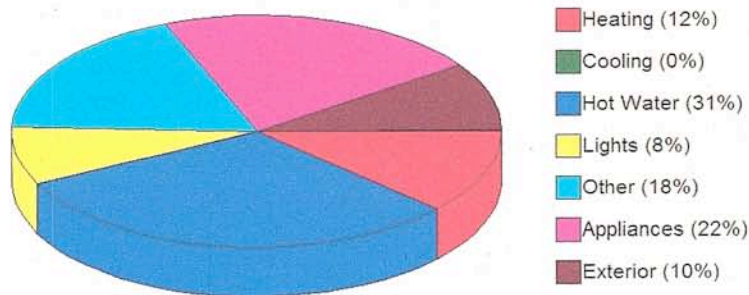


Client: **Spencer Wiltshire, D.**  
Address: **33 Rock Haven Green NW**  
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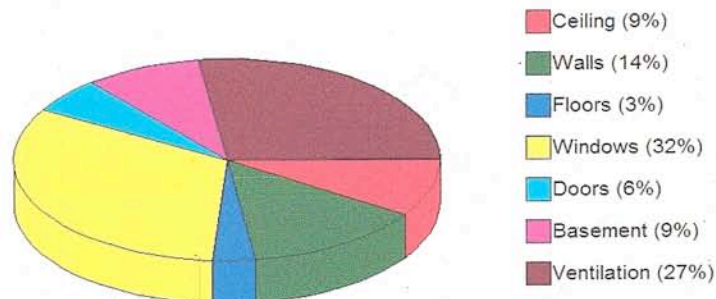
Audit Date: **12/21/2010**  
Auditor: **Kim Walton**  
File ID: **5278N00052**

Your house was analysed using a computer program developed by Natural Resources Canada. The following charts show the components of yearly energy consumption and heat loss for your home.

## COMPONENTS OF ANNUAL ENERGY CONSUMPTION



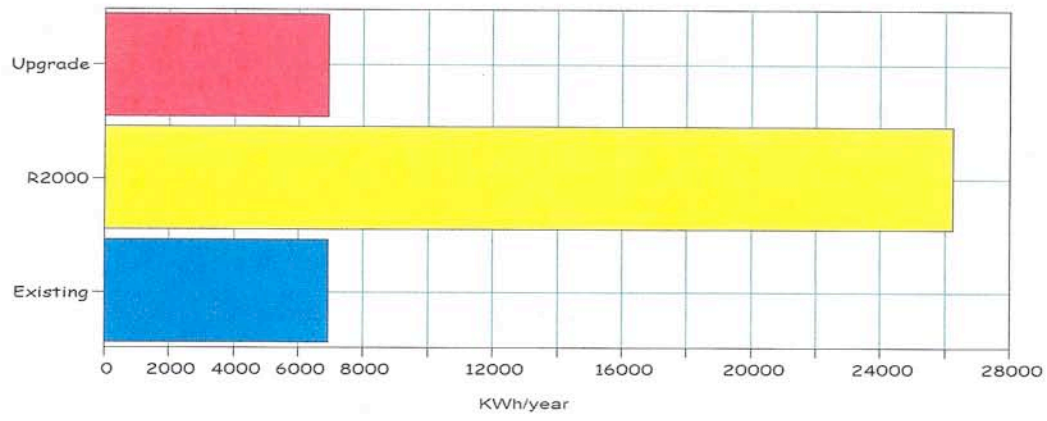
## COMPONENTS OF ANNUAL HEAT LOSS



Your house currently uses approximately 6906.2 kWh for space and hot water heating in an average year. The following chart illustrates the relationship between the energy used by your house, the anticipated energy use of your house after an energy upgrade and the energy used by an equivalent R2000 home.

## ANNUAL HEATING + HOT WATER ENERGY CONSUMPTION (kWh)





**Energy Rates**

The energy costs shown below are based on your home's estimated energy use and the average cost of the fuels used in your home at the time of inspection (average rates may change as consumption changes; equipment rental costs not included).

	Electricity		Natural Gas		Oil		Propane		Total	
	kWh	\$	cu. m	\$	L	\$	L	\$	GJ	\$
Current Estimate	15667	605.07	0	0.00	0	0.00	0	0.00	56	605
After Improvements	15667	605.07	0	0.00	0	0.00	0	0.00	56	605
Savings	0	0	0	0	0	0	0	0	0	0

Note: One gigajoule (GJ) is equal to the amount of energy that would be consumed by ten 100-Watt light bulbs over 12 days.

**Notice to Homeowner**

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Your house was analysed using the a computer program developed by Natural Resources Canada. Natural Resources Canada makes no warranty, expressed or implied, with respect to the energy consumption figures, cost estimates or energy efficiency recommendations included in this assessment. Actual energy consumption costs depend on a host of factors beyond the control of the Department of Natural Resources. In no event will Natural Resources Canada nor its minister, officers, employees or agents have any obligations or liability arising from tort, or for loss of revenue or profit, or for indirect, special, incidental or consequential damages as a result of the homeowner's use of the assessment report.

Some of the assumptions within the computer program may, or may not, be applicable to your household. Where assumptions have been made, they are based on an average appliance usage rate.

The simple payback period calculation for upgrades provided in this report is based on energy savings for all of the upgrade options implemented together. The actual savings may vary depending on the method of implementation, year-to-year variations in weather, lifestyle, and future changes in energy costs. Savings are approximate only. Natural Resources Canada makes no promise or guarantee as to the actual savings you may realize.

The annual energy costs shown in this report may not match your actual billed amount for the period shown. The energy cost values exclude all applicable taxes, basic charges, miscellaneous account adjustments, credits, or late payment charges, and are based on an average per unit energy cost (see Energy Rates section).