



NATURAL RESOURCES CANADA - INVENTIVE BY NATURE

EnerGuide Rating System version 15.0

A summary of updates to the ERS



Natural Resources
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Ressources naturelles
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Let's take a peek at the new package...



Welcome to the updated EnerGuide Rating System – Version 15.0



Updates to the ERS

- Why update the rating system?
- What's been updated?
- How, when and where will the updated system be rolled out?
- Questions and discussion of your plans, needs and other important items.



Why update the EnerGuide Rating System?

- The broadening scope of use by varying partners has led to increasing expectations of the rating system
- Our stakeholders have made it clear that the ERS is being called upon to meet more needs and be more robust than ever before:
 - Development and implementation of regulations
 - Utility, government and industry programs
 - High performance and net zero energy homes
 - New technologies in homes



Successful ERS consultation process

From 2010 to 2012, NRCan consulted with over 300 stakeholders and convened a Policy Advisory Committee. Stakeholders included:

- Federal, provincial, territorial and municipal government bodies
- Energy experts (energy advisors, modellers)
- Builder and renovator community
- Utility companies
- Manufacturers
- Consumer group
- Financial and real estate sectors



The vision developed by stakeholders

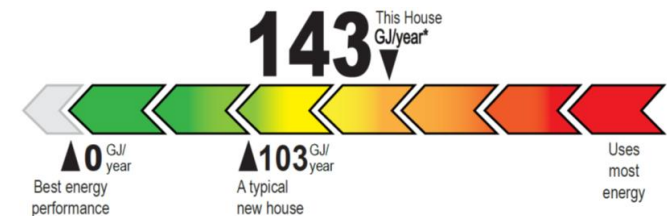
Help homeowners, industry and other stakeholders, become “energy literate” regarding homes and the decisions related to them

Provide specific, readily accessible energy performance information to support decision-making in designing, constructing, purchasing, operating or renovating a home



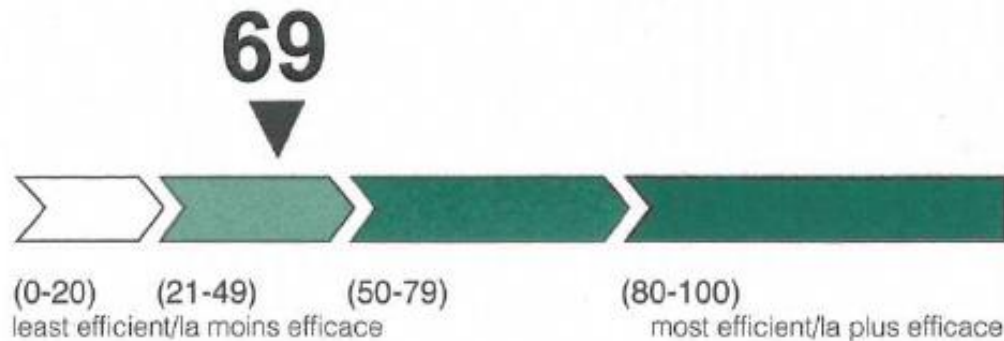
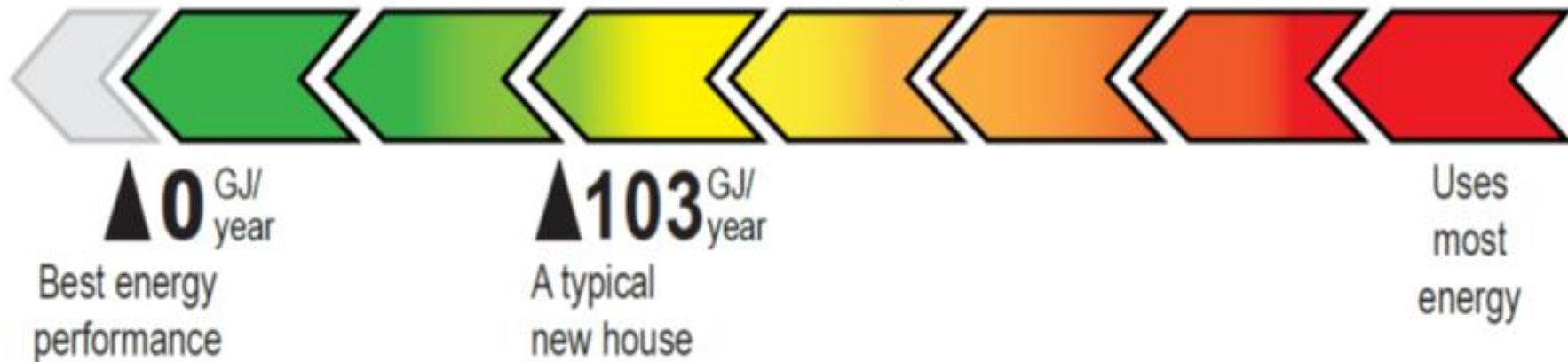
Key updates resulting from consultation recommendations

- Updated rating scale
- New homeowner materials
- Changes to elements included in the rating
- Updated HOT2000 software, house evaluation procedures and quality assurance procedures
- Updated delivery network testing, licensing and registration
- Plan for transitioning to the updated system



Updated Rating Scale: consumption-based rating

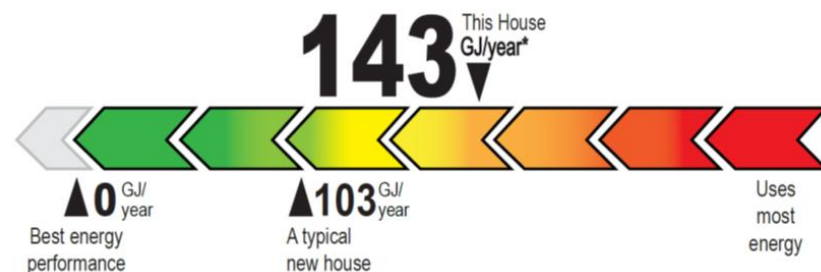
143 This House
GJ/year*



Updated Rating Scale

Benefits:

- Straightforward portrayal of home energy performance:
 - lower score means less energy use
- Performance metric familiar for consumers – similar to appliance and automobile ratings
- Relative performance shown versus a typical new house
- Energy improvement can be expressed in straight percentages
- Easy comparison of homes
- Good design is reflected in the rating – design matters
- Energy source neutral and better aligned with NBC



Why Gigajoules / year?

- Annual energy consumption rating is more transparent than the 0 – 100 scale
- A rating of 0 GJ/year means a net zero energy home
- Reasonably-sized figures – for a home that is rated at 105 GJ/year, a kWh rating would be 29,190 kWh/yr.
- Can be used for all types of energy. GJ is also converted to kWh or m³ in updated ERS materials for appropriate fuels



Updated ERS Services for Different Partner Needs

- Basic Service – house rating, house details, low homeowner interaction
- Renovation Upgrade Service – upgrade recommendations, homeowner interaction and role of advisor
- Construction Upgrade Service for New Homes – modelling and consulting with builders to improve new home design
- Construction Blower Door Service



Updated Communications Materials for Different ERS Services

- Key information to help homeowners make educated, energy-related decisions.
- Designed also with contractors, builders, regulators and bylaw/planning officials in mind
- Available in pdf for homeowner at launch – can then be provided by homeowner to others.



Updated Communications Materials

MyEnerGuide Homeowner Website

Government of Canada / Gouvernement du Canada | Canada.gc.ca | Services | Departments | Français

Natural Resources Canada | Canada

Energy | Mining/Materials | Forests | Earth Sciences | Hazards | Explosives | The North | Environment

Home > My EnerGuide Login

Energy

My EnerGuide Login

Welcome to MyEnerGuide

ENERGUIDE

Already had your EnerGuide home evaluation?

Ask your service organization for your reports, and check back for future online access

[I want to schedule an EnerGuide home evaluation](#)

An interactive and customized tool for your home

My Home's EnerGuide Rating: 170 GJ (gigajoules) per year
Calculated using Standard Operating Conditions

170 GJ per year

A0 Best energy performance | A56 Average | Max. energy

Compare your home to others in your region:

- A High Performance Home: This home's rating is 180 GJ per year.
- A Typical New Home: This home's rating is 160 GJ per year.

Recent updates to the EnerGuide Rating System

Planning energy efficient renovations

Enerpedia: An energy efficiency glossary

What is an EnerGuide home evaluation?

Why get an EnerGuide home evaluation?

How do I prepare for an EnerGuide home evaluation?

- Improved consumer hub of online EnerGuide information
- Convenient links to enhance understanding



Updated Communications Materials

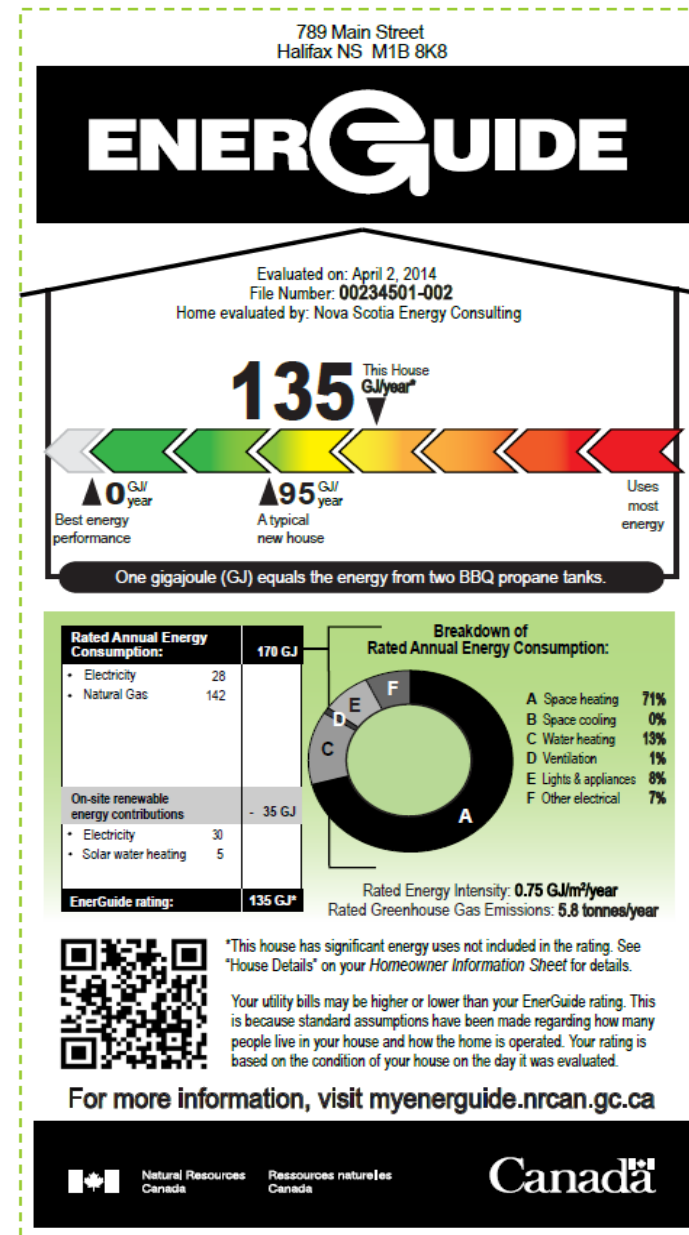


New Label

More like a nutrition label with enhanced information

Includes:

1. Rating and evaluation info
2. Equivalency definition of a gigajoule
3. Breakdown of rated energy consumption
4. Summary of rating calculation, including renewable contribution
5. Rated energy intensity
6. Rated greenhouse gas emissions
7. If applicable, note regarding atypical loads not in rating
8. Disclaimer re: actual usage
9. QR code to online info



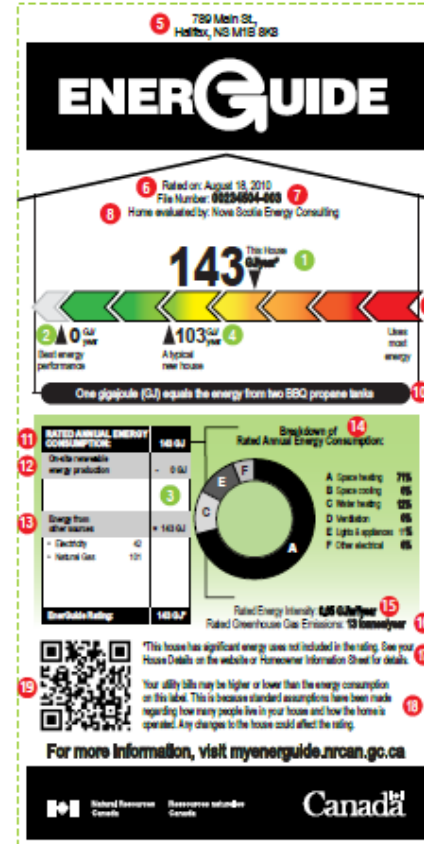
Guide to the Label

Section from page 1 of the guide

LABEL LEGEND

- 1 2 3 4 - refer to the front of this guide for details.
- 5 **HOUSE ADDRESS** - the location of the rated home.
- 6 **RATED ON** - the date on which the rating was conducted. Modifications to the house after this date could affect its rating.
- 7 **FILE NUMBER** - the unique identifier that should be referred to when contacting the service organization for additional services.
- 8 **HOME EVALUATED BY** - the name of the service organization that rated the home.
- 9 **THE ENERGY RATING SCALE** - shows how energy efficient the house is compared to a typical new house of the same size and model. More efficient homes have lower ratings, with the lowest rating being zero*.
- 10 **A GIGAJOULE (GJ)** is a unit of energy that can measure all fuel sources used in a home. Specifically, one GJ is the equivalent of 278 kWh of electricity, 27 m³ of natural gas, 26 L of oil, 39 L of propane, or 948,450 BTUs. One GJ is roughly equal to the energy from two standard barbeque propane tanks or the energy from 30 litres of gas in a car's gas tank.
- 11 **RATED ANNUAL ENERGY CONSUMPTION** - the total amount of energy the house consumes in a year regardless of the source of energy (on-site renewable or other sources).
- 12 **ON-SITE RENEWABLE ENERGY PRODUCTION** - the estimated annual amount of energy generated on-site by renewable energy technology. This includes solar thermal, solar photovoltaic, wind and micro-hydro technology. The generated renewable energy is subtracted from the rated annual energy consumption to produce the EnerGuide Rating.
- 13 **ENERGY FROM OTHER SOURCES** - the sources and amounts of conventional off-site energy (e.g. gas, oil, electricity), district energy or non-renewable energy produced on site that the house

An example of a label for an existing home



- 17 **SIGNIFICANT ENERGY USES NOT INCLUDED IN THE RATING** (where applicable) -- an asterisk next to the EnerGuide Rating identifies a house which uses significant energy for uncommon items such as a pool or hot tub. This energy use is not included in the rating. However, information on these items can be found in the House Details section of your Homeowner Information Sheet or by logging into your account on the EnerGuide



Better Information About The House

HOUSE DETAILS¹

BUILDING ENVELOPE DETAILS

ATTIC/CEILING

TYPE	INSULATION VALUE		AREA COVERED m ² (ft ²)
	Nominal RSI (R)	Effective RSI (R)	
Attic	3.52 (20)	3.34 (19)	80.0 (861)

MAIN WALLS

TYPE	INSULATION VALUE		AREA COVERED m ² (ft ²)
	Nominal RSI (R)	Effective RSI (R)	
2"x4" wood frame	2.11 (12)	2.09 (11.9)	94.8 (1020)

EXPOSED FLOORS

INSULATION VALUE		AREA COVERED m ² (ft ²)
Nominal RSI (R) ¹	Effective RSI (R)	
0 (0)	0.39 (2.2)	10 (108)

WINDOWS

#	TYPE	U-factor, W/m ² C	RSI (R)
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MECHANICAL SYSTEMS DETAILS

SPACE HEATING

TYPE	OUTPUT SIZE*	EFFICIENCY
Natural gas furnace	20 kW (68,300 BTU/hr)	78.0% AFUE
*Design heating load ¹ : 9.5 kW – refer to glossary for details		

SPACE COOLING

TYPE	OUTPUT SIZE*	EFFICIENCY
N/A	N/A	N/A
*Design cooling load ¹ : 7.4 kW – refer to glossary for details		

WATER HEATING

TYPE	SIZE	INPUT	EFFICIENCY
Natural gas storage tank	151 L (40 USG)	N/A	0.63 EF

VENTILATION

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



New Presentation of Recommendations



Current **ENERG**GUIDE Rating
170 GJ/year

Estimated Household Energy Use
192.1 GJ/year

YOUR ENERGY ACTION ROADMAP

Potential **ENERG**GUIDE Rating
94 GJ/year

Estimated Household Energy Use
106.5 GJ/year



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Updated Operating Conditions

Standard Operating Conditions

For Comparing Your Home to Other Homes

- 
- Same for all rated homes
 - Used for comparing homes
 - Used for the EnerGuide Rating and Label
 - Used for your *rated* annual energy consumption

Your Household Operating Conditions

For Understanding and Taking Action on Your Home

- 
- Specific to your home
 - Used for recommended upgrades
 - Used for your *estimated* annual energy consumption
 - Provided by you to your energy advisor



A more robust, reliable rating system

Improvements in:

- Data – collection procedures and types of inputs
- Software - energy performance simulations and outputs
- Delivery network qualifications – new exams must be passed by all current energy advisors, quality assurance specialists and service organization managers. Exams administered by 3rd party testers.



Examples of key changes to the rating calculation :

- Updated standard operating conditions to better reflect current Canadian norms
- New reduced operating conditions for net zero energy homes
- More technologies can be modelled and are included in the rating
- Procedures aligned for new and existing homes



Examples of key changes to the rating calculation (cont) :

- Air conditioning included
- Ventilation model updated and inputs improved
- Window dimensions now measured rather than defaulted for all homes
- Low-e detector used to test windows
- Heated floor area measured
- Drain water heat recovery – new model



Using a consumption-based rating scale

- Options Include:
- Example 1: Home must achieve an EnerGuide GJ/year rating that is ____% better than the ERS Reference House.
ERS v.15.0 provides a province/territory-specific Reference House for comparison.
- Example 2: Home must achieve an EnerGuide Rated Energy Intensity of ____GJ/m² /year or ____GJ/year
- Use updated 0-100 scale figure, H2K v.11



Using a consumption-based rating scale

- Bylaws that use the ERS as a benchmark might currently read: “To obtain density bonus, new home must achieve EnerGuide 80”.
- With ERS v.15.0, regulation might read: “To obtain density bonus, new home must achieve EnerGuide rating 10% better than its ERS Reference House”



Transitioning to an updated rating system



Transitioning to the updated ERS

- Targeted ERS Version 15.0 roll out beginning in 2015
- Targeted field trials in late 2014/early 2015
- Sufficient delivery network capacity will need to have passed updated exams
- Expect first exams available in early 2015
- 0-100 scale figure will still be generated for each rated home – using updated software
- MURB solution for ERS v.15.0 being explored



Transitioning to the updated ERS

- Partners encouraged to directly transition to ERS Version 15.0 at the earliest mutually beneficial time to take advantage of the updated system
- During transition, NRCan will provide support and guidance on how to use the updated rating



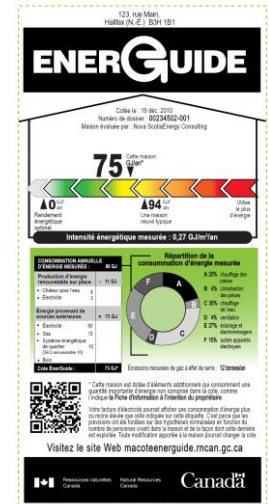
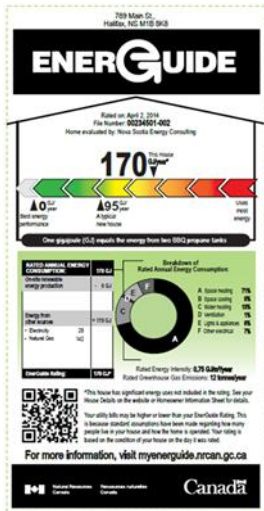
EnerGuide Rating System Version 15.0

NRCAN is proud to collaborate with partners and stakeholders.

Thank you.

Questions and Comments?

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