



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF AIR AND RADIATION

July 13, 2017

3705 Dillard Lane
Wake Forest, NC 27587

Built by: Grayson Homes
Home Energy Inspection by: Southern Energy Management

Dear New ENERGY STAR Homeowner,

Congratulations on your new home!

Your home has been qualified to meet the U.S. Environmental Protection Agency's strict ENERGY STAR guidelines, which means your home is significantly more energy efficient than houses that are built to standard code. By purchasing an ENERGY STAR qualified home, you now own a home that performs better for both you and the environment. This is because they typically include energy efficient features like airtight construction and duct work, effective insulation, high-efficiency heating and cooling equipment, and high performance windows. As a result, you can expect your new home to be more comfortable, with fewer drafts, more consistent temperature levels, and better indoor air quality.

On top of all this, you can look forward to saving money each month with lower utility bills. In fact, lower utility costs are built into every ENERGY STAR qualified home. These homes use substantially less energy for heating, cooling, and water heating than minimum code homes. As a result, you can expect to save approximately \$200-400 each year on your energy bills. In addition, the quality features and performance advantages associated with an energy efficient home provide the opportunity for higher resale value.

Buying an ENERGY STAR qualified home also means that you're helping to protect the environment. You can be proud that your new home reduces air pollution and the effects of global climate change, while saving our nation's natural resources for future generations.

Now that you're the owner of an ENERGY STAR qualified home, keep an eye out for ENERGY STAR lighting, appliances, and electronics. These products can provide you with additional benefits and do more to protect the environment. On average, these products use 20 percent less energy than comparable items in the marketplace. Just look for the label! For more information visit ENERGY STAR online at www.energystar.gov.

Again - congratulations on your new ENERGY STAR qualified home!

Sincerely,

A handwritten signature in black ink, reading "Sam Rashkin".

Sam Rashkin
Director
ENERGY STAR for New Homes

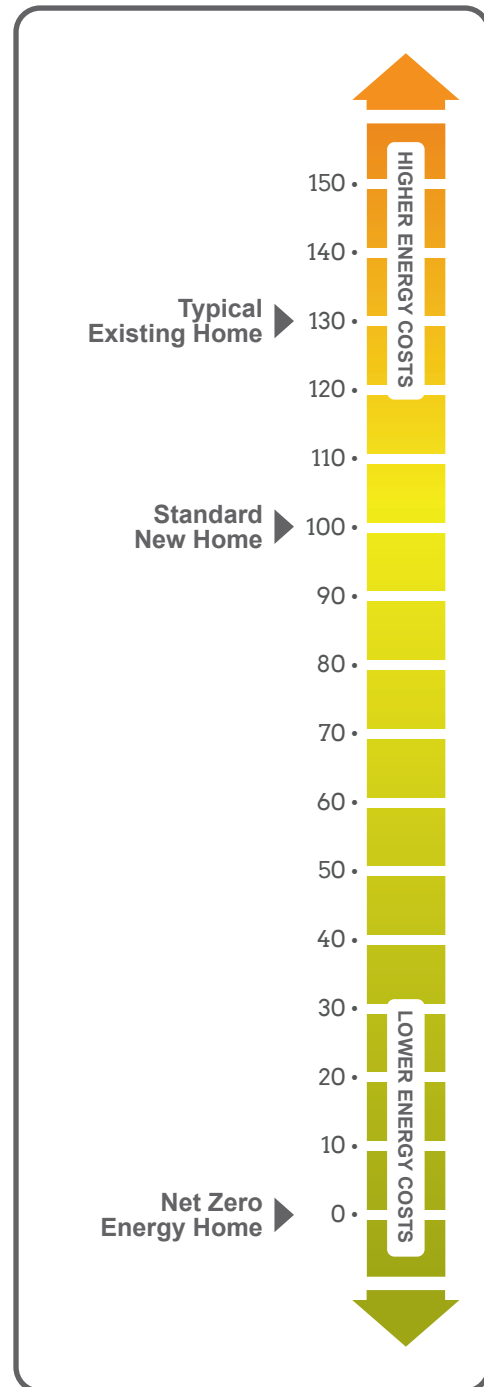
HOW TO READ THE HERS® INDEX

A new home built to the 2006 IECC would score a 100. One point in either direction indicates the home is either 1% more or less efficient than the 2006 IECC reference design home. Please reference your HERS certificate for more information regarding your home's individually rated HERS Index. For more information on the Home Energy Rating System, please visit: www.resnet.us

With home energy costs continuing to increase, it only makes sense to find out how energy efficient the home you're buying really is. The U.S. Department of Energy estimates that houses built in line with today's energy code use 30-40% less energy than older homes; however by evaluating your home's HERS index, you can better assess the efficiency of the home you're buying.

A Home Energy Rating involves an analysis of a home's efficiency through a comprehensive plan review and several on-site inspections during the construction of your home. Upon completion of the home's plan review, an independent third party Home Energy Rater will work with the builder to identify energy efficiency improvements. The Rater then conducts on-site inspections which include a blower door test (to test whole-house air infiltration) and a duct test (to test for unwanted air leakage in the duct system). The results of these tests, along with inputs derived from the comprehensive plan review, are used to generate the HERS Index for the home.

The home energy rating is a widely recognized tool in the mortgage industry. Home energy ratings can also be used in a variety of ways in the housing industry. Since a rating quantifies the energy performance of a home, the HERS Index provides a means to compare the relative energy efficiency of different homes.





An ENERGY STAR[®] Qualified Home

This certifies that the home built at

3705 Dillard Lane, Wake Forest, NC 27587

by Grayson Homes

and verified by Southern Energy Management

meets ENERGY STAR guidelines for energy efficiency as established by the U.S. Environmental Protection Agency.

ENERGY STAR qualified homes protect the environment by using less energy.

HERS Index: 63

A handwritten signature in black ink, appearing to read 'Sam Rashkin'.

Sam Rashkin
Director

ENERGY STAR for New Homes

July 13, 2017

www.energystar.gov



ENERGY STAR[®] CERTIFIED NEW HOME

Builder Name: Grayson Homes
Permit Date/Number:
Home Address: 3705 Dillard Lane
Wake Forest, NC 27587

Rating Company: Southern Energy Management
Rater Identification Number: 0476910
Rating Date: 2017-06-27
Version: 3.0

Standard Features of an ENERGY STAR Certified New Home

Your ENERGY STAR certified new home has been designed, constructed, and independently verified to meet rigorous requirements for energy efficiency set by the U.S. Environmental Protection Agency (EPA), including:

Thermal Enclosure System

A complete thermal enclosure system that includes comprehensive air sealing, quality-installed insulation and high-performing windows to deliver improved comfort and lower utility bills.



Air Infiltration Test: Htg: 1488 Clg: 1488 CFM50

Primary Insulation Levels:

Ceiling: R-26.0 **EndWall:** R-19.0
AGWall: R-19.0 **Floor:** R-0.0

Primary Window Efficiency:

U-Value: 0.290, **SHGC:** 0.250

Water Management System

A comprehensive water management system to protect roofs, walls, and foundations.



Flashing, a drainage plane, and site grading to move water from the roof to the ground and then away from the home.

Water-resistant materials on below-grade walls and underneath slabs to reduce the potential for water entering into the home.

Management of moisture levels in building materials during construction.

Heating, Cooling, and Ventilation System

A high-efficiency heating, cooling system, and ventilation system that is designed and installed for optimal performance.



Total Duct Leakage:

109.00 CFM @ 25 Pascals

Duct Leakage to Outdoors:

0.00 CFM @ 25 Pascals

Primary Heating (System Type • Fuel Type • Efficiency):

Fuel-fired air distribution, Natural gas, 95.0 AFUE.

Primary Cooling (System Type • Fuel Type • Efficiency):

Air conditioner, Electric, 14.0 SEER.

Energy Efficient Lighting and Appliances

Energy efficient products to help reduce utility bills, while providing high-quality performance.



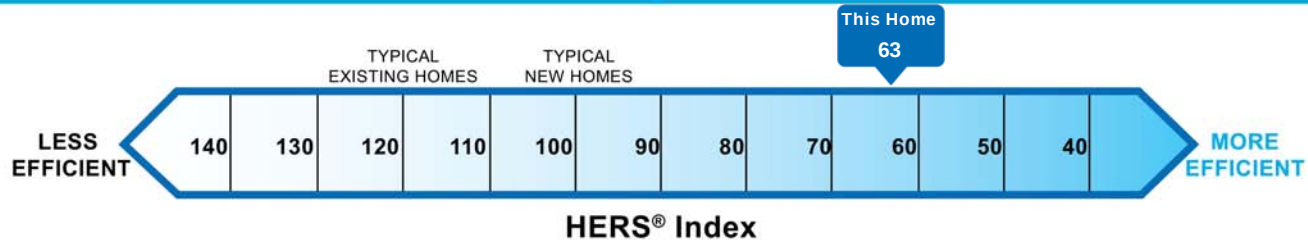
ENERGY STAR Qualified Lighting: 86%

ENERGY STAR Qualified Appliances and Fans:

Refrigerators: 0 **Dishwashers:** 1
Ceiling Fans: 0 **Exhaust Fans:** 0

Primary Water Heater (System Type • Fuel Type • Efficiency):

Instant water heater, Natural gas, 0.96 EF, 0.0 Gal.



The certificate provides a summary of the major energy efficiency and other construction features that contribute to this home earning the ENERGY STAR, including its Home Energy Rating System (HERS) score, as determined through independent inspection and verification performed by a trained professional. The home Energy Rating System is a nationally-recognized uniform measurement of the energy efficiency of homes.

Note that when a home contains multiple performance levels for a particular feature (e.g., window efficiency or insulation levels), the predominant value is shown. Also, homes may be certified to earn the ENERGY STAR using a sampling protocol, whereby one home is randomly selected from a set of homes for representative inspections and testing. In such cases, the features found in each home within the set are intended to meet or exceed the values presented on this certificate. The actual values for your home may differ, but offer equivalent or better performance.

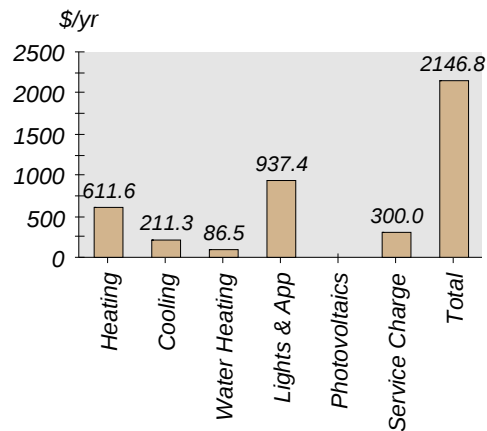
This certificate was printed using REM/Rate - Residential Energy Analysis and Rating Software v15.4.1. © 1985-2017 Noreasco, Boulder, Colorado.

Learn more at www.energystar.gov/homefeatures

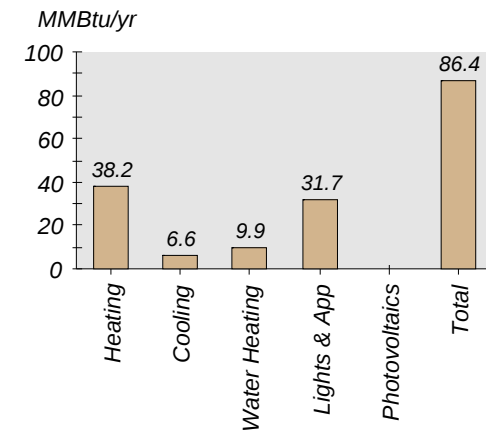
RESIDENTIAL NEW HOME ENERGY RATING CERTIFICATE



Estimated Annual Energy Cost



Estimated Annual Energy Consumption



Address: 3705 Dillard Lane
Wake Forest, NC 27587

House Type Single-family detached
Cond. Area: 3575 sq. ft.
Rating No.: 43883
Issue Date: October 05, 2017
Certification Verified

Annual Estimates*:
Electric(kWh): 13630
Natural gas(Therms): 399
CO2 emissions(Tons): 10
Annual Savings**: \$1639

* Based on standard operating condition:
** Based on a HERS 130 Index Home

Southern Energy Management
101 Kitty Hawk Dr.
Morrisville, NC 27560

Certified Rater: Tony Forte
Rater ID: 0476910
Registry ID: 343382417
Rating Date: 2017-06-27

REM/Rate - Residential Energy Analysis and Rating Software v15.4.1

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The Home Energy Rating Standard Disclosure for this home is available from the rating provider.

RESNET Home Energy Rating Standard Disclosure

For home located at: 3705 Dillard Lane

City: Wake Forest

State: NC

1. ☒ The Rater or Rater's employer is receiving a fee for providing the rating on this home.
2. ☐ In addition to the rating, the Rater or Rater's employer has also provided the following consulting services for this home.

- ☐ A. Mechanical system design
- ☐ B. Moisture control or indoor air quality consulting
- ☐ C. Performance testing and/or commissioning other than required for the rating itself
- ☐ D. Training for sales or construction personnel
- ☐ E. Other (specify below)

3. ☐ The Rater or Rater's employer is:

- ☐ A. The seller of this home or their agent
- ☐ B. The mortgage for some portion of the financial payments on this home
- ☐ C. An employee, contractor or consultant of the electric and/or natural gas utility serving this home

4. ☒ The Rater or Rater's employer is a supplier or installer of products, which may include:

HVAC Systems

Thermal Insulation Systems

Air sealing of envelope or duct systems

Windows or window shading systems

Energy efficient appliances

Construction (builder, developer, construction contractor, etc.)

Other (specify below):

Installed in this home by:		OR	is in the business of:	
☐ Rater	☐ Employer		☐ Rater	☐ Employer
☐ Rater	☐ Employer		☐ Rater	☐ Employer
☐ Rater	☐ Employer		☐ Rater	☐ Employer
☐ Rater	☐ Employer		☐ Rater	☐ Employer
☐ Rater	☐ Employer		☐ Rater	☐ Employer
☐ Rater	☐ Employer		☐ Rater	☐ Employer
☐ Rater	☐ Employer		☐ Rater	☒ Employer

Renewable Energy and Energy Management Systems

I attest that the above information is true and correct to the best of my knowledge. As a Rater or Rating Provider I abide by the rating quality control provisions of the Mortgage Industry National Home Energy Rating Standard as set forth by the Residential Energy Services Network (RESNET). The national rating quality control provisions of the rating standard are contained in Chapter One 4.C.8. of the standard and are posted at http://resnet.us/standards/RESNET_Mortgage_Industry_National_HERS_Standards.pdf. The Home Energy Rating Standard Disclosure for this home is available from the rating provider.

Tony Forte

Rater's Printed Name

0476910

Certification #

Rater's Signature

July 05, 2017

Date

RESNET Form 0300-2

REM/Rate - Residential Energy Analysis and Rating Software v15.4.1

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