

IECC 2015 Fuel Summary Comparison



Property

11705 Justify Dr
Colorado Springs, CO 80921
Model: Brentford Plan
Community: The Farm

Organization

EnergyLogic
Stephen Turnbo

Inspection Status

2023-11-01
Rater ID (RTIN): 1280680
RESNET Registered
(Confirmed)

11705 Justify Dr Vanguard
2017 PPRBD Code Compliance -
Reports

Builder

Vanguard Homes

Annual Energy Cost [\$ /yr]	2015 IECC	Rated Home	Savings	% Saved
Natural Gas	\$655	\$557	\$98	15%
Electric	\$1,011	\$971	\$40	4%

Annual End-Use Cost [\$ /yr]	2015 IECC	Rated Home	Savings	% Saved
Heating	\$529	\$417	\$112	21.2%
Cooling	\$133	\$128	\$5	3.8%
Water Heating	\$164	\$164	\$0	0%
Lights & Appliances	\$840	\$819	\$21	2.5%
Onsite Generation	-\$0	-\$0	\$0	0%
Service Charges	\$0	\$0	\$0	0%
Total	\$1,665	\$1,528	\$137	8.2%

Annual End-Use Consumption	2015 IECC	Rated Home	Savings	% Saved
Heating [Natural Gas Therms]	536.9	422.8	114.1	21.2%
Heating [Electric kWh]	622.5	490.3	132.3	21.2%
Cooling [Electric kWh]	1,237.3	1,196.2	41.1	3.3%
Hot Water [Natural Gas Therms]	190.6	190.5	0.1	0%
Lights & Appliances [Natural Gas Therms]	33.4	33.4	0.0	0%
Lights & Appliances [Electric kWh]	7,557.7	7,367.0	190.7	2.5%
Total [Natural Gas Therms]	760.9	646.7	114.1	15%
Total [Electric kWh]	9,417.5	9,053.5	364.0	3.9%
Total Onsite Generation kWh	0.0	0.0	0.0	0%

Peak Electric Consumption	2015 IECC	Rated Home	Savings	% Saved
Peak Winter kW	0.98	0.92	0.06	5.9%
Peak Summer kW	2.00	1.89	0.11	5.5%

Utility Rates

Electricity	Colorado Springs CSU Q4 2022
Natural Gas	Colorado Springs CSU Q4 2022

IECC 2015 (5 ACH50) Performance



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Annual Energy Cost

Design	IECC 2015 (5 ACH50) Performance	As Designed
Heating	\$626	\$417
Cooling	\$129	\$128
Water Heating	\$164	\$164
SubTotal - Used to determine compliance	\$919	\$709
Lights & Appliances	\$840	\$819
Onsite generation	\$0	\$0
Total	\$1,759	\$1,528

R405.3 Source Energy Exception: The proposed home uses 26.2 MBtu LESS source energy than the reference home.

Requirements

✓	R405.3	Performance-based compliance passes by 23.4%	The proposed house meets the IECC 2015 (5 ACH50) Performance reference energy bill requirement by \$210.6 (26.2 MBtu).
✓	R402.4.1.2	Air Leakage Testing	Air sealing is 1.61 ACH at 50 Pa. It must not exceed 5.00 ACH at 50 Pa.
✓	R402.5	Area-weighted average fenestration SHGC	Area-weighted average fenestration SHGC is 0.401. The maximum allowed value is [No Limit].
✓	R402.5	Area-weighted average fenestration U-Factor	
✓	R404.1	Lighting Equipment	At least 75.0% of fixtures shall be high-efficacy lamps, currently 100.0% are high-efficacy.
✓	R403.6.1	Mechanical Ventilation Efficacy	
✓	R403.3.3	Duct Testing	
✓	Mandatory Checklist	Mandatory code requirements that are not checked by Ekotrope must be met.	2015 IECC Mandatory Checklist must be checked as complete.
✓	R405.2	Duct Insulation	All ducts outside the thermal envelope must be insulated to at least R6.0.

Design exceeds requirements for IECC 2015 (5 ACH50) Performance compliance by 23.4%.

As a 3rd party extension of the code jurisdiction utilizing these reports, I certify that this energy code compliance document has been created in accordance with the requirements of Chapter 4 of the adopted International Energy Conservation Code based on EL PASO County. If rating is Projected, I certify that the building design described herein is consistent with the building plans, specifications, and other calculations submitted with the permit application. If rating is Confirmed, I certify that the address referenced above has been inspected/tested and that the mandatory provisions of the IECC have been installed to meet or exceed the intent of the IECC or will be verified as such by another party.

Name: Stephen Turnbo

Signature: 

Organization: EnergyLogic

Digitally signed: 11/2/23 at 1:21 PM

Ekotrope RATER - Version 4.1.2.3272

IECC 2015 (5 ACH50) Performance compliance results calculated using Ekotrope RATER's energy and code compliance algorithm, including appropriate amendments.
Ekotrope RATER is a RESNET Accredited HERS Rating Tool. All results are based on data entered by Ekotrope users.
Ekotrope disclaims all liability for the information shown on this report.

11705 Justify Dr

Colorado Springs, CO 80921

Builder: Vanguard Homes

Model: Brentford Plan Community: The Farm

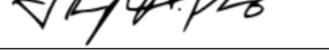
**THIS HOME IS CERTIFIED TO MEET THE IECC 2015 (5
ACH50) ENERGY CODE**

Building Features

Ceiling Attic, R-49	Duct Supply R-0.0, Return R-0.0
Above Grade Walls R-23	Duct Leakage to Outside 87 CFM @ 25Pa (2.33 / 100 ft ²)
Foundation Walls R-19	Total Duct Leakage 175 CFM @ 25Pa (Rough-In, with Air Handler)
Framed Floor R-50	Heating Furnace • Natural Gas • 96 AFUE
Slab R-0.0 Perimeter, R-0.0 Under	Cooling Air Conditioner • Electric • 13 SEER
Infiltration 1057.3 CFM50 (1.61 ACH50)	Water Heating Residential Water Heater • Natural Gas • 0.93 UEF
Window U-Value: 0.3, SHGC: 0.4	

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Organization: EnergyLogic

Signature: 
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IECC 2015 (5 ACH50) Label

11705 Justify Dr

Model: Brentford Plan

Ekotrope RATER - Version: 4.1.2.3272

HERS® Index Score: 54

Building Envelope Specs

Ceiling: R-49

Above Grade Walls: R-23

Foundation Walls: R-19

Exposed Floor: R-50

Slab: R-0

Infiltration: 1057.3 CFM50 (1.61 ACH50)

Duct Insulation: Supply: R0, Return: R0

Duct Lkg to Outdoors: 87 CFM @ 25Pa (2.33 / 100 ft²)

Window & Door Specs

U-Value: 0.3, SHGC: 0.4

Door: R-5

Mechanical Equipment Specs

Heating: Furnace • Natural Gas • 96 AFUE

Cooling: Air Conditioner • Electric • 13 SEER

Hot Water: Residential Water Heater • Natural Gas • 0.93 UEF

Average Mechanical Ventilation: 75 CFM

Builder or Design Professional

Signature: _____

Air Leakage Report

Property

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General Information

Conditioned Floor Area [ft ²]	3,730
Infiltration Volume [ft ³]	39,509
Number of Bedrooms	4

Air Leakage

Measured Infiltration	1057.3 CFM50 (1.61 ACH50)
ACH50 (Calculated)	1.61
ELA [sq. in.] (Calculated)	58.01
ELA per 100 s.f. Shell Area (Calculated)	0.717
CFM50 (Calculated)	1,057
CFM50 / s.f. Shell Area (Calculated)	0.131

Duct Leakage

	System 1
Leakage to Outdoors	87 CFM @ 25Pa (2.33 / 100 ft ²)
Total Leakage Test Type	Rough-In, with Air Handler
Total Leakage [CFM @ 25 Pa]	175.0
Total Leakage [CFM25 / 100 s.f.]	4.7
Total Leakage [CFM25 / CFA]	0.047

Mechanical Ventilation

Rate [CFM]	145 CFM
Hours per day	12.4
Fan Power	23 Watts
Recovery Efficiency %	0.0
Runs at least once every 3 hrs?	true
Average Rate [CFM]	75.0 CFM
2010 ASHRAE 62.2 Req. Cont. Ventilation	74.8
2013 ASHRAE 62.2 Req. Cont. Ventilation	108.5

Fuel Summary

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Annual Energy Cost

Natural Gas	\$568
Electric	\$1,073

Annual End-Use Cost

Heating	\$484
Cooling	\$67
Water Heating	\$111
Lights & Appliances	\$980
Onsite Generation	-\$0
Service Charges	\$0
Total	\$1,641

Annual End-Use Consumption

Heating [Natural Gas Therms]	410.6
Heating [Electric kWh]	476.1
Cooling [Electric kWh]	521.6
Hot Water [Natural Gas Therms]	107.8
Lights & Appliances [Natural Gas Therms]	33.4
Lights & Appliances [Electric kWh]	7,367.0
Total [Natural Gas Therms]	551.9
Total [Electric kWh]	8,364.8
Total Onsite Generation [Electric kWh]	0.0

Peak Electric Consumption

Peak Winter kW	0.92
Peak Summer kW	1.66

Utility Rates

Electricity	Colorado Springs CSU Q4 2022
Natural Gas	Colorado Springs CSU Q4 2022

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General Building Information

Number Of Bedrooms	4
Number Of Floors	1
Conditioned Floor Area [sq. ft.]	3,730
Has Electric Vehicle Ready Space	No
Unconditioned, attached garage?	Yes
Conditioned Volume [cu. ft.]	39,509
Total Units in Building	1
Residence Type	Single family detached
Number of Floors in Building	-
Floor Number	-
Model	Brentford Plan
Community	The Farm
RESNET/IECC 2006-2018 Climate Zone	5B
IECC 2021 Climate Zone	5B

Foundation Wall

Name	Library Type	Height Above Grade	Depth Below Grade	Perimeter	Location	Enclosing
Ambient finished	16oc R19 G1	1	8	143	Exposed Exterior	Conditioned Space
Draped	R19 Draped Full	1	8	49	Exposed Exterior	Conditioned Space

Foundation Wall Library List

Name	Feet From Wall Top To Continuous Insulation Top	Feet From Wall Top To Continuous Insulation Bottom	Is Fully Insulated	Continuous R-value	Cavity R-value	Effective Insulation R-value
16oc R19 G1	N/A	N/A	Yes	0.00	19.00	N/A
R19 Draped Full	N/A	N/A	Yes	19.00	N/A	N/A

Slab

Name	Library Type	Perimeter	Floor Grade	Carpet R	Exposed Masonry Area	Surface Area	Location	Enclosing
Bsmt Slab A	Uninsulated Slab	143	Below Grade	1	0	1,630.0 ft²	Exposed Exterior	Conditioned Space
Bsmt Slab B	Uninsulated Slab	49	Below Grade	0	229	229.0 ft²	Exposed Exterior	Conditioned Space

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Slab Library List

Name	Construction Type	Slab Completely Insulated?	Underslab Insulation Width [ft]	Perimeter Insulation Depth [ft]	Perimeter Insulation R Value	Perimeter Insulation Is Exterior	Thermal Break	Effective R-value
Uninsulated Slab	Wood Frame / Other	No	0	0	0	Yes	No	0.00

Framed Floor

Name	Library Type	Carpet R	Floor Grade	Surface Area	Location
Cantilever	12" R50 16" OC	1	Above Grade	12.0 ft²	Exposed Exterior

Framed Floor Library List

Name	Effective R-value
12" R50 16" OC	41.503

Rim Joist

Name	Library Type	Surface Area	Location
Ambient	R 19	161.0 ft²	Exposed Exterior
Garage	R 19	26.0 ft²	Unconditioned, attached garage

Rim Joist Library List

Name	Effective Insulation R-value
R 19	19.00

Wall

Name	Library Type	Surface Color	Surface Area	Location
AGW 2x6	2x6 R23 16" OC BF G1	Medium	1,737.0 ft²	Exposed Exterior

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Name	Library Type	Surface Color	Surface Area	Location
Garage 2x6	2x6 R23 16" OC BF G1	Medium	262.4 ft²	Unconditioned, attached garage
Knee	2x4 R13 16"OC FB	Medium	349.0 ft²	Attic

Wall Library List

Name	Effective R-value
2x4 R13 16"OC FB	12.631
2x6 R23 16" OC BF G1	19.445

Glazing

Name	Library Type	Wall Assignment	Foundation Wall Assignment	Is Operable	Overhang Depth	Overhang Ft To Top	Overhang Ft To Bottom	Orientation	Surface Area
Back	3040	AGW 2x6		Yes	0	0	0	East	69.0 ft²
Back Slider	2841	AGW 2x6		Yes	0	0	0	East	42.0 ft²
Bsmt L	3040		Ambient finished	Yes	0	0	0	North	40.0 ft²
Bsmt R	3040		Ambient finished	Yes	0	0	0	South	40.0 ft²
Front	3040	AGW 2x6		Yes	0	0	0	West	3.0 ft²
Left	3040	AGW 2x6		Yes	0	0	0	North	25.0 ft²
NORTH Window / Glass Door - Inspection Sync	3040		Draped	Yes	0	0	0	North	20.0 ft²
Right	3040	AGW 2x6		Yes	0	0	0	South	65.0 ft²
WEST Window / Glass Door - Inspection Sync	3040	AGW 2x6		Yes	17	0	7	West	21.0 ft²
WEST Window / Glass Door - Inspection Sync	3040	AGW 2x6		Yes	7	0	5	West	30.0 ft²

Glazing Library List

Name	Shgc	U-factor
2841	0.41	0.280
3040	0.4	0.300

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Skylight

None Present

Skylight Library List

None Present

Opaque Door

Name	Library Type	Wall Assignment	Foundation Wall Assignment	Emittance	Solar Absorptance	Surface Color	Surface Area	Location
Front	Energy Star Door	AGW 2x6		0.9	0.75	Medium	24.0 ft²	Exposed Exterior
Garage	Energy Star Door	Garage 2x6		0.9	0.75	Medium	18.0 ft²	Unconditioned, attached garage

Opaque Door Library List

Name	Effective R-value
Energy Star Door	5.00

Roof Insulation

Name	Library Type	Attic Exterior Area [ft²]	Clay or Concrete Roof Tiles	Surface Color	Surface Area	Location
Attic flat	R-49 BF 24"oc	886.6	No	Dark	886.6 ft²	Attic
Attic vault	R-49 BF 24"oc	1,067.9	No	Dark	1,067.9 ft²	Attic

Roof Insulation Library List

Name	Has Radiant Barrier	Effective R-value
R-49 BF 24"oc	No	49.613

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Whole House Infiltration

Infiltration	Measurement Type	Shelter Class
1057.3 CFM at 50 Pa	Blower-door tested	4

Mechanical Ventilation

Ventilation Type	Ventilation Rate [ft ³ / Minute]	Operational hours per day	Fan Watts	Runs once every three hours	Energy Recovery Percent	Model Number	Manufacturer
Supply Only	145 CFM	12.41	23 Watts	Yes	0		

Lighting

% Interior Fluorescent Lighting	% Interior LED Lighting	% Exterior Fluorescent Lighting	% Exterior LED Lighting	% Garage Fluorescent Lighting	% Garage LED Lighting
0	100	0	100	0	100

Onsite Generation

None Present

Onsite Generation Library List

None Present

Solar Generation

None Present

Dehumidifier

None Present

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Dehumidifier Library List

None Present

Whole House Fan

None Present

Whole House Fan Library List

None Present

Conditioning Equipment

Name	Library Type	Serial Number	Heating Percent Load	Cooling Percent Load	Hot Water Percent Load	Location
Air conditioner (2)	13SEER/30BTU 2.5 ton		0%	100%	0%	Conditioned Space
Fuel-fired air distribution (3)	S9V2B080U4PS***		100%	0%	0%	Conditioned Space
Water Heating (1)	RTGH-95DVLN		0%	0%	100%	Conditioned Space

Equipment Type: 13SEER/30BTU 2.5 ton

Equipment Type	Air Conditioner
Fuel Type	Electric
Distribution Type	Forced Air
Motor Type	ECM (Variable Speed)
Heat Pump System Type	Unspecified
Cooling Efficiency	13 SEER
Cooling Capacity [kBtu/h]	30

Equipment Type: RTGH-95DVLN

Equipment Type	Residential Water Heater
Fuel Type	Natural Gas
Distribution Type	Hydronic Delivery (Radiant)
Hot Water Efficiency	0.93 UEF
Tankless?	Yes

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Equipment Type: S9V2B080U4PS***

Equipment Type	Furnace
Fuel Type	Natural Gas
Distribution Type	Forced Air
Motor Type	ECM (Variable Speed)
Heating Efficiency	96 AFUE
Heating Capacity [kBtu/h]	78
Use default EAE	No
EAE [kWh]	441

Distribution System

Distribution Type	Forced Air
Heating Equipment	Fuel-fired air distribution (3)
Cooling Equipment	Air conditioner (2)
Sq. Feet Served	3,730
# Return Grilles	10
Supply Duct R Value	0
Return Duct R Value	0
Supply Duct Area [ft²]	1007.1
Return Duct Area [ft²]	932.5
Leakage to Outdoors	87 CFM @ 25Pa (2.33 / 100 ft²)
Total Leakage	175 CFM25
Total Leakage Duct Test Conditions	Rough-In, with Air Handler
Use Default Flow Rate	Yes
Duct 1	
Duct Location	Conditioned Space
Percent Supply Area	100
Percent Return Area	100

HVAC Grading

HVAC Grading Not Conducted

Ceiling Fan

Has Ceiling Fan	Yes
Cfm Per Watt	70.4

Water Distribution

Water Fixture Type	Low-flow
Use Default Hot Water Pipe Length	No
Hot Water Pipe Length [ft]	40
At Least R3 Pipe Insulation?	No
Hot Water Recirculation System?	No
Recirculation System Pipe Loop Length [ft]	0
Drain Water Heat Recovery?	No

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Clothes Dryer

Cef	3.01
Fuel Type	Electric
Field Utilization	Timer Controls
Is Outside Conditioned Space	No
Clothes Dryer Available	Yes
Defaults Type	HERS Reference

Clothes Washer

Label Energy Rating	400 kWh/Year
Annual Gas Cost	\$27.00
Electric Rate	\$0.12/kWh
Gas Rate	\$1.09/Therm
Capacity	3
Imef	1
Defaults Type	HERS Reference
Load Type	Front-load
Loads Per Week	6
Is Outside Conditioned Space	No
Clothes Washer Available	Yes

Dishwasher

Dishwasher Defaults Type	Custom
Dishwasher Size	Standard
Dishwasher Efficiency	270 kWh
Annual Gas Cost	\$33.12
Electric Rate	\$0.12/kWh
Gas Rate	\$1.09/Therm
Is Outside Conditioned Space	No
Dishwasher Available	Yes

Appliances and Controls

Programmable thermostat?	Yes
Range/Oven Fuel	Natural Gas
Convection Oven?	No
Induction Range?	No
Range/Oven Outside Conditioned Space?	No
Refrigerator Consumption	705 kWh/Year
Refrigerator Outside Conditioned Space?	No

Notes

Home Energy Rating Certificate

Final Report

Rating Date: 2023-11-01

Registry ID: 768258491

Ekotrope ID: dNBO55ed

energyLogic
theenergylogic.com

HERS® Index Score:

54

Your home's HERS score is a relative performance score. The lower the number, the more energy efficient the home. To learn more, visit www.hersindex.com

Annual Savings

\$1,884

*Relative to an average U.S. home

Home:

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Builder:

Vanguard Homes

Your Home's Estimated Energy Use:

	Use [MBtu]	Annual Cost
Heating	50.4	\$571
Cooling	1.5	\$58
Hot Water	10.8	\$111
Lights/Appliances	28.8	\$991
Service Charges		\$0
Generation (e.g. Solar)	0.0	\$0
Total:	91.5	\$1,732

This home meets or exceeds the criteria of the following:

ENERGY STAR v3.1

ENERGY STAR v3

2015 International Energy Conservation Code

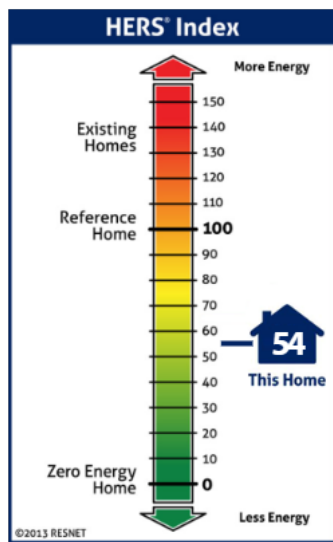
Rating Completed by:

Energy Rater: Stephen Turnbo
RESNET ID: 1280680

Rating Company: EnergyLogic
PO Box N, Berthoud, CO 80513
(970) 556-0839

Rating Provider: EnergyLogic
PO Box N, Berthoud, CO 80513
(970) 556-0839

Stephen Turnbo, Certified Energy Rater
Digitally signed: 11/2/23 at 1:33 PM



Home Feature Summary:

Home Type:	Single family detached
Model:	Brentford Plan
Community:	The Farm
Conditioned Floor Area:	3,730 ft ²
Number of Bedrooms:	4
Primary Heating System:	Furnace • Natural Gas • 96 AFUE
Primary Cooling System:	Air Conditioner • Electric • 13 SEER
Primary Water Heating:	Residential Water Heater • Natural Gas • 0.93 UEF
House Tightness:	1057.3 CFM50 (1.61 ACH50)
Ventilation:	145 CFM • 23 Watts • Supply Only
Duct Leakage to Outside:	87 CFM @ 25Pa (2.33 / 100 ft ²)
Above Grade Walls:	R-23
Ceiling:	Attic, R-49
Window Type:	U-Value: 0.3, SHGC: 0.4
Foundation Walls:	R-19
Framed Floor:	R-50



Ekotrope RATER - Version:4.1.2.3272

The Energy Rating Disclosure for this home is available from the Approved Rating Provider.
This report does not constitute any warranty or guarantee.

RESNET HOME ENERGY RATING Standard Disclosure

For home(s) located at: 11705 Justify Dr, Colorado Springs,
CO

Check the applicable disclosure(s):

- ☒ 1. The Rater or the Rater's employer is receiving a fee for providing the rating on this home.
- ☒ 2. In addition to the rating, the Rater or the 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)

- ☒ 3. The Rater or the Rater's employer is:

- ☐ A. The seller of this home or their agent
- ☐ B. The mortgagor for some portion of the financed 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:

Products	Installed in this home by		OR is in the business of	
HVAC systems	<input type="checkbox"/> Rater	<input type="checkbox"/> Employer	<input type="checkbox"/> Rater	<input type="checkbox"/> Employer
Thermal insulation systems	<input type="checkbox"/> Rater	<input type="checkbox"/> Employer	<input type="checkbox"/> Rater	<input type="checkbox"/> Employer
Air sealing of envelope or duct systems	<input type="checkbox"/> Rater	<input type="checkbox"/> Employer	<input type="checkbox"/> Rater	<input type="checkbox"/> Employer
Energy efficient appliances	<input type="checkbox"/> Rater	<input type="checkbox"/> Employer	<input type="checkbox"/> Rater	<input type="checkbox"/> Employer
Construction (builder, developer, construction contractor, etc)	<input type="checkbox"/> Rater	<input type="checkbox"/> Employer	<input type="checkbox"/> Rater	<input type="checkbox"/> Employer
Other (specify): <input type="text"/>	<input type="checkbox"/> Rater	<input type="checkbox"/> Employer	<input type="checkbox"/> Rater	<input type="checkbox"/> Employer

- ☐ 5. This home has been verified under the provisions of Chapter 6, Section 603 "Technical Requirements for Sampling" of the Mortgage Industry National Home Energy Rating Standard as set forth by the Residential Energy Services Network (RESNET). Rater Certification #: 1280680

Name: Stephen Turnbo

Signature: 

Organization: EnergyLogic

Digitally signed: 11/2/23 at 1:33 PM

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 102.1.4.6 of the standard and are posted at

<https://standards.resnet.us>

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



ENERGY STAR® CERTIFIED NEW CONSTRUCTION

Builder/Developer: Vanguard Homes

Permit Date/Number:

Home/Unit Address: 11705 Justify Dr, Colorado Springs, CO
80921

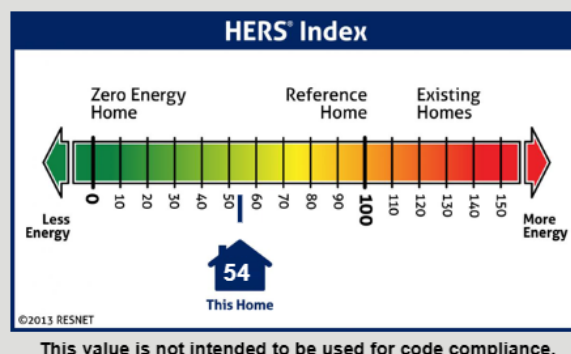
Rating Company: EnergyLogic

Rater ID Number: 1280680

Rating Date: 2023-11-01

Oversight By: RESNET

Program/Version Number: 3.0



Standard Features of ENERGY STAR Certified New Homes and Apartments

Your ENERGY STAR certified new home or apartment 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: 1057.3 CFM50 (1.61 ACH50)

Primary Insulation Levels:

Ceiling: R-49 **Floor:** R-50
Wall: R-23 **Slab:** R-0

Primary Window Efficiency:

U-Value: 0.3 **SHGC:** 0.4



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 or building.

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

Management of moisture levels in building materials during construction.



Heating, Cooling, and Ventilation System

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

Total Duct Leakage: **Duct Leakage to Outdoors:**
175 CFM @ 25Pa (Rough-~~87~~ CFM @ 25Pa (2.33 / 100 ft²)
with Air Handler)

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

Furnace • Natural Gas • 96 AFUE

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

Air Conditioner • Electric • 13 SEER

Whole-House Ventilation Type (System Type):

Supply Only



Energy Efficient Lighting and Appliances

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

Energy Efficient Lighting: 100%

ENERGY STAR Certified Appliances and Fans:

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

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

Residential Water Heater • Natural Gas • 0.93 UEF



About this certificate

The certificate provides a summary of the major energy efficiency and other construction features that contribute to this home or apartment earning the ENERGY STAR, as determined through independent inspection and verification performed by a trained professional. The Energy Rating Index or HERS index for this home, if reported, is calculated in accordance with ANSI/RESNET/ICC Standard 301, with any exceptions

approved by EPA. Because the version of Standard 301 used to calculate this index may not align with the version referenced by code, this value is not intended to be used to demonstrate compliance with code. Note that when a home or apartment contains multiple performance levels for a particular feature (e.g., window efficiency or insulation levels), the predominant value is shown. Also, homes and apartments may be certified

to earn the ENERGY STAR using a sampling protocol, whereby one home or apartment is randomly selected from a set for representative inspections and testing. In such cases, the features found in each home or apartment within the set are intended to meet or exceed the values presented on this certificate. The actual values for your home or apartment may differ, but offer equivalent or better performance.



ENERGY STAR® CERTIFIED NEW CONSTRUCTION

Builder/Developer: Vanguard Homes

Permit Date/Number:

Home/Unit Address: 11705 Justify Dr, Colorado Springs, CO
80921

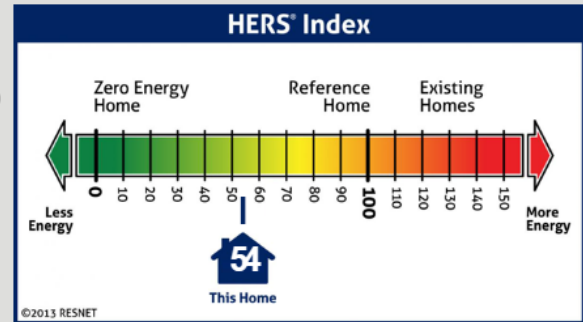
Rating Company: EnergyLogic

Rater ID Number: 1280680

Rating Date: 2023-11-01

Oversight By: RESNET

Program/Version Number: 3.1



Standard Features of ENERGY STAR Certified New Homes and Apartments

Your ENERGY STAR certified new home or apartment 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: 1057.3 CFM50 (1.61 ACH50)

Primary Insulation Levels:

Ceiling: R-49 **Floor:** R-50
Wall: R-23 **Slab:** R-0

Primary Window Efficiency:

U-Value: 0.3 **SHGC:** 0.4



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 or building.

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

Management of moisture levels in building materials during construction.



Heating, Cooling, and Ventilation System

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

Total Duct Leakage: **Duct Leakage to Outdoors:**
175 CFM @ 25Pa (Rough-est, CFM @ 25Pa (2.33 / 100 ft²)
with Air Handler)

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

Furnace • Natural Gas • 96 AFUE

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

Air Conditioner • Electric • 13 SEER

Whole-House Ventilation Type (System Type):

Supply Only



Energy Efficient Lighting and Appliances

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

Energy Efficient Lighting: 100%

ENERGY STAR Certified Appliances and Fans:

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

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

Residential Water Heater • Natural Gas • 0.93 UEF



About this certificate

The certificate provides a summary of the major energy efficiency and other construction features that contribute to this home or apartment earning the ENERGY STAR, as determined through independent inspection and verification performed by a trained professional. The Energy Rating Index or HERS index for this home, if reported, is calculated in accordance with ANSI/RESNET/ICC Standard 301, with any exceptions

approved by EPA. Because the version of Standard 301 used to calculate this index may not align with the version referenced by code, this value is not intended to be used to demonstrate compliance with code. Note that when a home or apartment contains multiple performance levels for a particular feature (e.g., window efficiency or insulation levels), the predominant value is shown. Also, homes and apartments may be certified

to earn the ENERGY STAR using a sampling protocol, whereby one home or apartment is randomly selected from a set for representative inspections and testing. In such cases, the features found in each home or apartment within the set are intended to meet or exceed the values presented on this certificate. The actual values for your home or apartment may differ, but offer equivalent or better performance.

ENERGY STAR V3 Home Report



Property
11705 Justify Dr
Colorado Springs, CO 80921
Model: Brentford Plan
Community: The Farm

11705 Justify Dr Vanguard
2017 PPRBD Code Compliance -
Reports

Organization
EnergyLogic
Stephen Turnbo

Builder
Vanguard Homes

Inspection Status
2023-11-01
Rater ID (RTIN): 1280680
RESNET Registered
(Confirmed)

Mandatory Requirements

- ✓ Duct leakage at post construction better than or equal to applicable requirements.
- ✓ Total building thermal envelope UA meets or exceeds applicable requirements.
- ✓ Slab on Grade Insulation must be > R-5, and at IECC 2009 Depth for Climate Zones 4 and above.
- ✓ Envelope insulation achieves RESNET Grade I installation, or Grade II with insulated sheathing.
- ✓ Total window thermal properties meet or exceed the applicable requirements
- ✓ Duct insulation meets the EPA minimum requirements of R-6.
- ✓ Mechanical ventilation system is installed in the home.
- ✓ ENERGY STAR Checklists fully verified and complete.

ERI (HERS) Index Target

Reference Home ERI (HERS)	83
SAF (Size Adjustment Factor)	0.93
SAF Adjusted ERI (HERS) Target	77
As Designed Home ERI (HERS)	54
As Designed Home ERI (HERS) w/o PV	54

Normalized, Modified End-Use Loads (MBtu / year)

	ENERGY STAR	As Designed
Heating	46.2	28.8
Cooling	8.0	3.2
Water Heating	12.6	3.5
Lights and Appliances	31.1	28.5
Total	97.9	64.0



This home **MEETS** or **EXCEEDS** the energy efficiency requirements for designation as an EPA ENERGY STAR Qualified Home under Version 3.0

Pollution Prevented

Type of Emissions	Reduction
Carbon Dioxide (CO ₂) - tons/yr	4.3

Energy Cost Savings	\$/yr
Heating	392
Cooling	86
Water Heating	104
Lights & Appliances	97
Generation Savings	0
Total	680

The energy savings and pollution prevented are calculated by comparing the Rated Home to the ENERGY STAR Version 3.0 Reference Home as defined in the ENERGY STAR Qualified Homes ERI (HERS) Target Procedure for National Program Requirements, Version 3.0 promulgated by the Environmental Protection Agency (EPA). In accordance with the ANSI/RESNET/ICC 301 Standard, building inputs affecting setpoints infiltration rates, window shading and the existence of mechanical systems may have been changed prior to calculating loads

ENERGY STAR V3.1 Home Report



Property
11705 Justify Dr
Colorado Springs, CO 80921
Model: Brentford Plan
Community: The Farm

11705 Justify Dr Vanguard
2017 PPRBD Code Compliance -
Reports

Organization
EnergyLogic
Stephen Turnbo

Builder
Vanguard Homes

Inspection Status
2023-11-01
Rater ID (RTIN): 1280680
RESNET Registered
(Confirmed)

Mandatory Requirements

- ✓ Duct leakage at post construction better than or equal to applicable requirements.
- ✓ Total building thermal envelope UA meets or exceeds applicable requirements.
- ✓ Slab on Grade Insulation must be > R-5, and at IECC 2009 Depth for Climate Zones 4 and above.
- ✓ Envelope insulation achieves RESNET Grade I installation, or Grade II with insulated sheathing.
- ✓ Total window thermal properties meet or exceed the applicable requirements
- ✓ Duct insulation meets the EPA minimum requirements of R-6.
- ✓ Mechanical ventilation system is installed in the home.
- ✓ ENERGY STAR Checklists fully verified and complete.

ERI (HERS) Index Target

Reference Home ERI (HERS)	64
SAF (Size Adjustment Factor)	1.00
SAF Adjusted ERI (HERS) Target	64
As Designed Home ERI (HERS)	54
As Designed Home ERI (HERS) w/o PV	54

Normalized, Modified End-Use Loads (MBtu / year)

	ENERGY STAR	As Designed
Heating	27.4	28.8
Cooling	5.8	3.2
Water Heating	12.6	3.5
Lights and Appliances	30.0	28.5
Total	75.8	64.0



This home **MEETS** or **EXCEEDS** the energy efficiency requirements for designation as an EPA ENERGY STAR Qualified Home under Version 3.1

Pollution Prevented

Type of Emissions	Reduction
Carbon Dioxide (CO ₂) - tons/yr	1.4

Energy Cost Savings	\$/yr
Heating	18
Cooling	42
Water Heating	104
Lights & Appliances	57
Generation Savings	0
Total	221

The energy savings and pollution prevented are calculated by comparing the Rated Home to the ENERGY STAR Version 3.1 Reference Home as defined in the ENERGY STAR Qualified Homes ERI (HERS) Target Procedure for National Program Requirements, Version 3.1 promulgated by the Environmental Protection Agency (EPA). In accordance with the ANSI/RESNET/ICC 301 Standard, building inputs affecting setpoints infiltration rates, window shading and the existence of mechanical systems may have been changed prior to calculating loads