

Carbon Rating & HERS® Certificate

Final Report

Rating Date: 2023-10-17
 Registry ID: 698250257
 Ekotrope ID: vjja8l7v



Carbon Index

-2

HERS® Index

-2

About these ratings:
 Both ratings are relative performance scores. A lower Carbon Rating Index means fewer carbon emissions for a home. The lower the HERS Rating, the more energy efficient the home. For more info: www.resnet.us/about/resnet-carbon-rating-index www.hers.com

Home:
 4640 Array Drive
 Chapel Hill, NC 27516

Builder:
 Silver Developers LLC

	CO ₂ e Emissions [tons/yr]	Annual Cost
Heating	2.6	\$694
Cooling	0.5	\$259
Hot Water	0.2	\$71
Lights/Appliances	2.0	\$639
Service Charges		\$168
Generation (e.g. Solar)	-5.6	-\$1,663
Total:	-0.2	\$168

Annual Savings*

12.7

Tons CO₂e

\$3,835

*Relative to an average U.S. home

This home meets or exceeds the criteria of the following:

- 2021 International Energy Conservation Code
- 2018 International Energy Conservation Code
- 2015 International Energy Conservation Code
- 2012 International Energy Conservation Code
- 2009 International Energy Conservation Code
- 2006 International Energy Conservation Code

Rating Completed by:

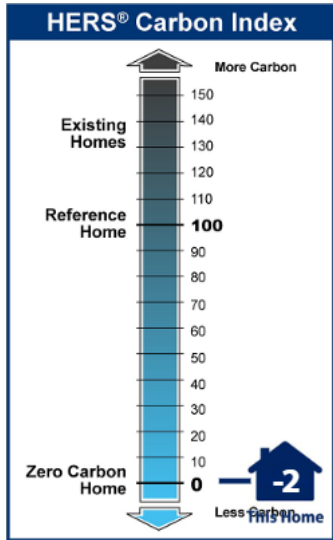
Energy Rater: Henry Hogan
 RESNET ID: 3357391

Rating Company: Southern Energy Management
 5908 Triangle Drive, Raleigh, NC 27617
 919-836-0330

Rating Provider: Southern Energy Management
 5908 Triangle Drive, Raleigh, NC 27617
 919-836-0330



Henry Hogan, Certified Energy Rater
 Date: 11/6/23 at 9:29 AM



Home Feature Summary:

- Home Type: Single family detached
- Model: Newton
- Community: Custom 27516
- Conditioned Floor Area: 3,037 ft²
- Number of Bedrooms: 3
- Primary Heating System: Air Source Heat Pump • Electric • 8.85 HSPF
- Primary Cooling System: Air Source Heat Pump • Electric • 15 SEER
- Primary Water Heating: Residential Water Heater • Electric • 3.45 UEF
- House Tightness: 1325 CFM50 (1.87 ACH50)
- Ventilation: 245 CFM • 96 Watts • ERV
- Duct Leakage to Outside: 0 CFM @ 25Pa (0 / 100 ft²)
- Above Grade Walls: R-19
- Ceiling: Vaulted Roof, R-30
- Window Type: U-Value: 0.27, SHGC: 0.32
- Foundation Walls: R-10
- Framed Floor: N/A

Carbon Index Emissions Comparison



Property

4640 Array Drive
Chapel Hill, NC 27516
Model: Newton
Community: Custom 27516

Organization

Southern Energy Manager
Henry Hogan

Inspection Status

2023-10-17
Rater ID (RTIN): 3357391
RESNET Registered
(Confirmed)

Builder

Silver Developers LLC

4640 Array Drive Silver Developers
4640 Array Drive

Carbon Dioxide Equivalent (CO ₂ e) [tons/yr]	Carbon Ref.	Rated Home	Savings	% Saved
Heating Total	4.87	2.64	2.23	45.72%
Cooling Total	1.03	0.51	0.52	50.79%
Hot Water Total	0.92	0.23	0.69	74.81%
Lights & Appliances Total	2.78	2.00	0.78	28.08%
Emissions Savings from Onsite Generation	-0.00	-5.60	5.60	
TOTAL	9.60	-0.22	9.82	102.28%

Sulfur Dioxide (SO ₂) [lbs/yr]	Carbon Ref.	Rated Home	Savings	% Saved
TOTAL	5.37	3.07	2.30	42.89%

Nitrogen Oxide (NO _x) [lbs/yr]	Carbon Ref.	Rated Home	Savings	% Saved
TOTAL	8.81	5.03	3.78	42.89%

Energy Use Intensity (EUI) [kBtu/ft ²]	Carbon Ref.	Rated Home	Savings	% Saved
Site EUI	34.86	-0.60	35.46	101.71%

Emissions are calculated using the Emission Factors published in the Table 5.1.2(1) of RESNET MINHERS Addendum 66f by RESNET, in Table Table 5.1.2(1) and in accordance with Section 6.2.

CO₂ equivalent (CO₂e) emissions combine three gasses: carbon dioxide (CO₂), methane (CH₄), and nitrous oxides (N₂O).

According to the MINHERS Addendum 66f, CO₂e Emissions are computed on an hourly basis using the Purchased Energy by fuel type, instead of the annual energy balance.