



ZERO

ENERGY READY HOME

YOUR HOME WAS DESIGNED, ENGINEERED,
AND CONSTRUCTED IN CONFORMANCE TO
U.S. DEPARTMENT OF ENERGY (DOE)
GUIDELINES FOR EXTRAORDINARY
LEVELS OF EXCELLENCE AND QUALITY.

This home built at 22 Harbor Ave
By Dunhill Companies LTD
Verified by John S. Rodenhizer

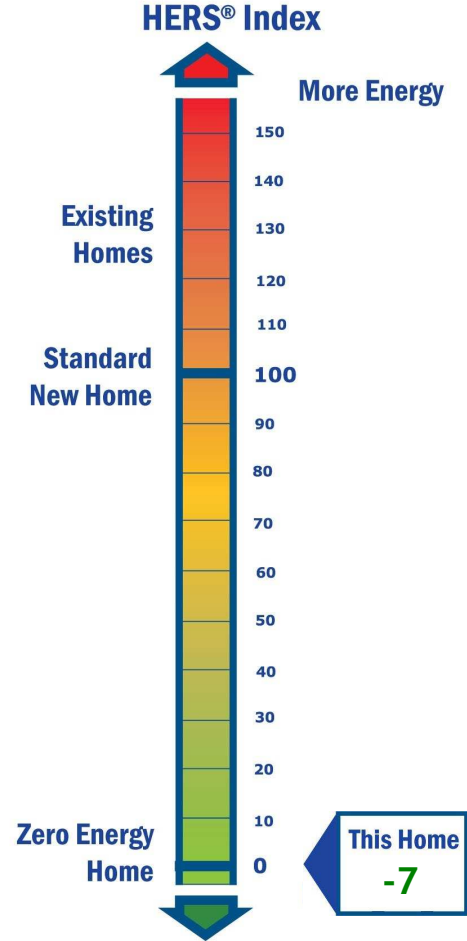
an independent professional organization, to meet or exceed strict home performance guidelines set by The U.S. Department of Energy on 10/28/2014

THIS HOME MEETS OR EXCEEDS THE MINIMUM CRITERIA FOR THE FOLLOWING:

- EPA WaterSense for New Homes Program
- DOE Zero Energy Ready Home Quality Management Guidelines

REM/Rate - Residential Energy Analysis and Rating Software v14.5.1

SAM RASHKIN, CHIEF ARCHITECT
BUILDING TECHNOLOGIES
U.S. DEPARTMENT OF ENERGY





ENERGY STAR[®] CERTIFIED NEW HOME

Builder Name: Dunhill Companies LTD
Permit Date/Number:
Home Address: 22 Harbor Ave
Falmouth , MA 02540-3519

Rating Company: JSR Adaptive Energy Solutions
Rater Identification Number: 9335873
Rating Date: 1/20/2014
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: 110 Cig: 110 CFM50**

Primary Insulation Levels:

Ceiling: R-91.2

AGWall: R-52.69

Slab: R-59.3

Primary Window Efficiency:

U-Value: 0.152, SHGC: 0.500

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:

NA

Duct Leakage to Outdoors:

NA

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

Electric, Htg: 10.6 HSPF. Cig: 24.2 SEER.

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

Electric, Htg: 10.6 HSPF. Cig: 24.2 SEER.

Energy Efficient Lighting and Appliances

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



ENERGY STAR Qualified Lighting: **100%**

ENERGY STAR Qualified Appliances and Fans:

Refrigerators: 1

Dishwashers: 1

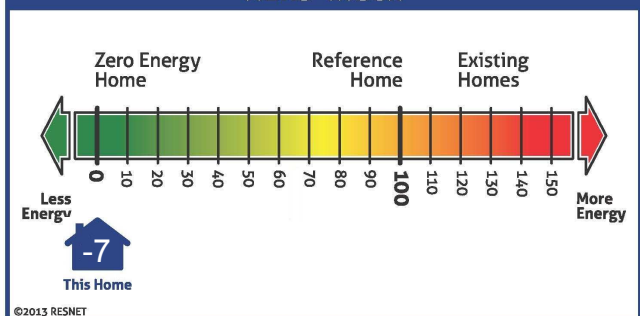
Ceiling Fans: 6

Exhaust Fans: 0

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

Heat pump, Electric, 2.40 EF, 80.0 Gal.

HERS[®] Index



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 - v14.5.1 .
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Learn more at www.energystar.gov/homefeatures



CERTIFIED NEW HOME

ENERGY STAR

Address:

**22 Harbor Ave
Falmouth , MA**

Built by:

Dunhill Companies LTD

Verified by:

John S. Rodenhizer

Date:

1/20/2014

ENERGY STAR® for Homes Version Number:

Version 3.0

Optional information:

HERS Index: -7

This home has been independently verified to meet EPA's strict
guidelines for energy efficiency.

Learn more at energystar.gov

Home Energy Rating Certificate

Roy Passive House
22 Harbor Ave
Falmouth, MA 02540-3519



5 Stars Plus
Confirmed

HERS Index: -7

Efficient Home Comparison: 107% Better

General Information

Conditioned Area	2548 sq. ft.	House Type	Single-family detached
Conditioned Volume	17710 cubic ft.	Foundation	Slab
Bedrooms	4		

Mechanical Systems Features

Air-source heat pump:	Electric, Htg: 10.6 HSPF. Clg: 24.2 SEER.
Water Heating:	Heat pump, Electric, 2.40 EF, 80.0 Gal.
Duct Leakage to Outside	NA
Ventilation System	Balanced: ERV, 98 cfm, 42.0 watts.
Programmable Thermostat	Heat=Yes; Cool=Yes

Building Shell Features

Ceiling Flat	R-91.2	Slab	R-15.2 Edge, R-44.1 Under
Sealed Attic	NA	Exposed Floor	NA
Vaulted Ceiling	NA	Window Type	U-Value: 0.152, SHGC: 0.500
Above Grade Walls	R-52.63	Infiltration Rate	Htg: 11:01:00 CFM50
Foundation Walls	NA	Method	Blower door test

Lights and Appliance Features

Percent Interior Lighting	100.00	Range/Oven Fuel	Electric
Percent Garage Lighting	100.00	Clothes Dryer Fuel	Electric
Refrigerator (kWh/yr)	547.00	Clothes Dryer EF	3.01
Dishwasher Energy Factor	1.19	Ceiling Fan (cfm/Watt)	568.00

Registry ID	484445715
Rating Number	034
Certified Energy Rater	John S. Rodenhizer
Rating Date	1/20/2014
Rating Ordered For	Daniel Roy

Estimated Annual Energy Cost

Use	MMBtu	Cost	Percent
Heating	4.0	\$176	-68%
Cooling	2.3	\$100	-39%
Hot Water	4.8	\$212	-82%
Lights/Appliances	21.0	\$922	-356%
Photovoltaics	-39.1	\$-1717	663%
Service Charges		\$48	-19%
Total	-7.0	\$-259	100%

Criteria

This home meets or exceeds the minimum criteria for the following:

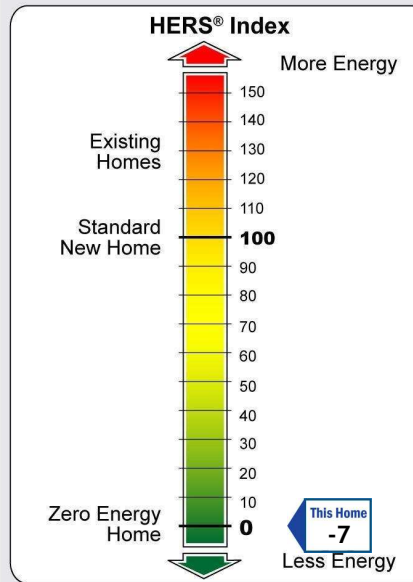
PA # HERS1998-146
Building Efficiency Resource Company
P.O. Box 530
North Creek, NY 12853
Phone # 800-399-9620
Fax # 404-935-0553

Certified Energy Rater:

REM/Rate - Residential Energy Analysis and Rating Software v14.5.1

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

RESNET HERS Index Certificate



22 Harbor Ave
Falmouth, MA 02540-3519
Rater: John S. Rodenhizer
Registry ID: 484445715
Annual Estimates*:

CO2 emissions(Tons): -1
Energy Savings (\$)**: 5362
*Based on standard operating conditions
**Based on U.S. DOE designation of a HERS Index of 130 as the 'Typical Existing Home'

PA # HERS1998-146
Building Efficiency
ResourceCompany
P.O. Box 530
North Creek, NY 12853

This home has been inspected
and performance tested in
accordance with Chapter 3 of
the RESNET standards.

RESNET[®]
www.resnet.us