



Home Energy Rating Certificate



Rating Score

Rating
35.0

Issued To

JASON MOROSKO
7710 LLEWELLYN RD
ATHENS, OH

Estimated Annual Energy Operating Cost
\$1,404.96

Signature

1/4/12
Date

Cornerstone
Energy Conservation Services

Reference Number 13029



An ENERGY STAR® Labeled Home

This certifies that the home built at
7710 LLEWELLYN RD, ATHENS, OH

By JASON MOROSKO
and Verified by: Cornerstone Energy Conservation Services

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

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

April 20, 2011

David Lee
Director
ENERGY STAR Residential Programs

Sam Rashkin
Director
ENERGY STAR for New Homes

www.energystar.gov



Home Energy Rating Certificate

7710 Llewellyn Road

Athens, OH 45701



**5 Stars Plus
Confirmed Rating**

Uniform Energy Rating System

1 Star	1 Star Plus	2 Stars	2 Stars Plus	3 Stars	3 Stars Plus	4 Stars	4 Stars Plus	5 Stars	5 Stars Plus
500-401	400-301	300-251	250-201	200-151	150-101	100-91	90-86	85-71	70 or Less

Energy Efficient

HERS Index: 35

General Information

Conditioned Area: 3809 sq. ft. HouseType: Single-family detached
 Conditioned Volume: 35792 cubic ft. Foundation: Slab
 Bedrooms: 4

Mechanical Systems Features

Water Heating: Heat pump, Electric, 2.35 EF, 50.0 Gal, R-10 wrap.
 Air-source heat pump: Electric, Htg: 9.2 HSPF. Clg: 21.0 SEER.

Duct Leakage to Outside: NA
 Ventilation System: Balanced: ERV, 76 cfm, 48.0 watts.
 Programmable Thermostat: Heating: Yes Cooling: Yes

Building Shell Features

Ceiling Flat: NA Exposed Floor: NA
 Vaulted Ceiling: R-100 Window Type: SoftLite CSMT 19/37**
 Above Grade Walls: R-39 Infiltration:
 Foundation Walls: NA Rate: Htg: 395 Clg: 395 CFM50
 Slab: R-21.7 Edge, R-41.3 Under Method: Blower door test

Lights and Appliance Features

Percent Fluorescent Pin-Based: 0.00 Clothes Dryer Fuel: Electric
 Percent Fluorescent CFL: 100.00 Range/Oven Fuel: Electric
 Refrigerator (kWh/yr): 383.00 Ceiling Fan (cfm/Watt): 0.00
 Dishwasher Energy Factor: 0.46

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

REM/Rate - Residential Energy Analysis and Rating Software v12.96

This information does not constitute any warranty of energy cost or savings.

© 1985-2011 Architectural Energy Corporation, Boulder, Colorado.

Rating Number: 2011-124

Certified Energy Rater: Ron Young

Rating Date: 4/20/11

Rating Ordered For: Jason Morosko

Estimated Annual Energy Cost

Use	Confirmed Rating		
	MMBtu	Cost	Percent
Heating	5.0	\$146	10%
Cooling	2.2	\$64	5%
Hot Water	5.7	\$167	12%
Lights/Appliances	34.9	\$1022	73%
Photovoltaics	-0.0	\$-0	-0%
Service Charges		\$0	0%
Total		\$1400	100%

**This home meets or exceeds the minimum
criteria for all of the following:**

Cornerstone Energy Conservation

1320 McKinley Ave Ste B

Columbus, OH 43222

614 351 1439

614 351 6650

2005 EPACT ENERGY EFFICIENT HOME TAX CREDIT

Date:	January 04, 2012	Rating No.:	2011-124
Building Name:	Morosko	Rating Org.:	Positive Energy Solutions LLC
Owner's Name:	Jason Morosko	Phone No.:	740-448-2100
Property:	7710 Llewellyn Road	Rater's Name:	Ron Young
Address:	Athens, OH 45701	Rater's No.:	3763672
Builder's Name:	Jason Morosko		
Weather Site:	Athens, OH	Rating Type:	Confirmed Rating
File Name:	7710 Llewellyn Rd.blg	Rating Date:	4/20/11

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

	2004 IECC	
	50% Target	As Designed
Heating:	36.3	7.4
Cooling:	13.1	6.2
Total:	49.4	13.7

Envelope Loads (MMBtu/year)

	2004 IECC	
	90% Target	As Designed
Heating:	65.3	10.7
Cooling:	23.6	11.5
Total:	88.8	22.2

This home MEETS the requirements for the residential energy efficiency tax credits under Section 1332, Credit for Construction of New Energy Efficient Homes, of the Energy Policy Act of 2005.

As demonstrated above, this dwelling unit has a projected level of annual heating and cooling energy consumption that is at least 50% below the annual level of heating cooling energy consumption of a reference dwelling in the same climate zone, and the building envelope components improvements alone account for at least 10% of those savings. The projected heating and cooling energy savings above have been calculated in the manner prescribed in Section 2.02 of Notice 2006-27 of the Internal Revenue Service. Field inspections of the dwelling unit performed by the undersigned eligible certifier during and after the completion of construction have confirmed that all features of the home affecting such heating and cooling energy consumption comply with the design specifications provided to the undersigned certifier.

Building Features

Ceiling Flat: NA	Slab: R-21.7 Edge, R-41.3 Under
Vaulted Ceiling: R-100	Duct: NA
Above Grade Walls: R-39	Window: U-Value = 0.190, SHGC = 0.370
Foundation Walls: NA	Air-Source HP: Electric, Htg: 9.2 HSPF. Clg: 21.0 SEER.
Exposed Floor: NA	

Under penalties of perjury, I declare that I have examined this certification, including accompanying documents, and to the best of my knowledge and belief, the facts presented in support of this certification are true, correct, and complete

Name: Ron Young
 Company: Positive Energy Solutions LLC
 Address: 13540 Howard Road, Millfield, OH 45761

Signature: 
 Date: January 04, 2012

ENERGY STAR VERSION 2 HOME REPORT

Date:	January 04, 2012	Rating No.:	2011-124
Building Name:	Morosko	Rating Org.:	Positive Energy Solutions LLC
Owner's Name:	Jason Morosko	Phone No.:	740-448-2100
Property:	7710 Llewellyn Road	Rater's Name:	Ron Young
Address:	Athens, OH 45701	Rater's No.:	3763672
Builder's Name:	Jason Morosko		
Weather Site:	Athens, OH	Rating Type:	Confirmed Rating
File Name:	7710 Llewellyn Rd.blg	Rating Date:	4/20/11

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

	<i>ENERGY STAR</i>	<i>As Designed</i>
Heating:	61.6	7.4
Cooling:	22.3	6.2
Water heating:	11.9	5.4
Lighting & Appliances:	36.4	34.9
Total:	132.2	53.9
HERS Index:	85	35

ENERGY STAR Mandatory Requirements

<input checked="" type="checkbox"/> Thermal Bypass Inspection Checklist	<input checked="" type="checkbox"/> ENERGY STAR Products
<input checked="" type="checkbox"/> Ductwork Requirements	<input checked="" type="checkbox"/> ENERGY STAR Scoring Exceptions

This home MEETS OR EXCEEDS the energy efficiency requirements for designation as an EPA ENERGY STAR Qualified Home.

Pollution Prevented		Energy Cost Savings (\$/year)	
<i>Type of Emissions</i>	<i>Reduction</i>		
Carbon Dioxide (CO2) - tons/yr	17.7	Heating:	\$1279
Sulfur Dioxide (SO2) - lbs/yr	284.2	Cooling:	\$204
Nitrogen Oxides (NOx) - lbs/yr	66.3	Water Heating:	\$281
		Lights & Appliances:	\$231
		Total:	\$1995

The energy savings and pollution prevented are calculated by comparing the Rated Home to the Reference Home as defined in the "Mortgage Industry National Home Energy Rating Systems Standards" as promulgated by the Residential Energy Services Network (RESNET). In accordance with these guidelines, building inputs affecting setpoints, infiltration rates, window shading and the existence of mechanical systems may have been changed prior to calculating loads.

AIR LEAKAGE REPORT

Date:	January 04, 2012	Rating No.:	2011-124
Building Name:	Morosko	Rating Org.:	Positive Energy Solutions LLC
Owner's Name:	Jason Morosko	Phone No.:	740-448-2100
Property:	7710 Llewellyn Road	Rater's Name:	Ron Young
Address:	Athens, OH 45701	Rater's No.:	3763672
Builder's Name:	Jason Morosko		
Weather Site:	Athens, OH	Rating Type:	Confirmed Rating
File Name:	7710 Llewellyn Rd.blg	Rating Date:	4/20/11

Whole House Infiltration	Blower door test	
	<i>Heating</i>	<i>Cooling</i>
Natural ACH:	0.04	0.03
ACH @ 50 Pascals:	0.66	0.66
CFM @ 25 Pascals:	252	252
CFM @ 50 Pascals:	395	395
Eff. Leakage Area: [sq.in]	21.7	21.7
Specific Leakage Area:	0.00004	0.00004
ELA/100 sf shell: [sq.in]	0.27	0.27

Duct Leakage	Leakage to Outside Units
	CFM @ 25 Pascals:
	CFM25 / CFMfan:
	CFM25 / CFA:
	CFM per Std 152:
	CFM per Std 152 / CFA:
	CFM @ 50 Pascals:
	Eff. Leakage Area: [sq.in]
	Thermal Efficiency:
	Total Duct Leakage Units
	Total Duct Leakage:

Ventilation	Mechanical:	Balanced
	Sensible Recovery Eff. (%):	83.0
	Total Recovery Eff. (%):	53.0
	Rate (cfm):	76
	Hours/Day:	24.0
	Fan Watts:	48.0
	Cooling Ventilation:	Natural Ventilation

ASHRAE 62.2 - 2010 Ventilation Requirements

For this home to comply with ASHRAE Standard 62.2 - 2010 Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings, a minimum of 76 cfm of mechanical ventilation must be provided continuously, 24 hours per day. Alternatively, an intermittently operating mechanical ventilation system may be used if the ventilation rate is adjusted accordingly. For example, a 151 cfm mechanical ventilation system would need to operate 12 hours per day, as long as the system operates to provide required average ventilation once each

SOURCE ENERGY & EMISSIONS REPORT

Date:	January 04, 2012	Rating No.:	2011-124
Building Name:	Morosko	Rating Org.:	Positive Energy Solutions LLC
Owner's Name:	Jason Morosko	Phone No.:	740-448-2100
Property:	7710 Llewellyn Road	Rater's Name:	Ron Young
Address:	Athens, OH 45701	Rater's No.:	3763672
Builder's Name:	Jason Morosko		
Weather Site:	Athens, OH	Rating Type:	Confirmed Rating
File Name:	7710 Llewellyn Rd.blg	Rating Date:	4/20/11

Source Energy Consumption (MMBtu/year)

All Electric

	<i>Reference Home</i>	<i>As Designed</i>	<i>Difference</i>	<i>% Difference</i>
Heating:	180.4	18.5	-161.9	-89.7%
Cooling:	33.8	8.0	-25.8	-76.2%
Water heating:	56.6	21.1	-35.5	-62.7%
Lights & Appliances:	158.3	129.1	-29.2	-18.5%
Photovoltaics:	0.0	0.0		
Total:	429.2	176.8	-252.4	-58.8%

Total Emissions

All Electric

<i>Type of Emissions</i>	<i>Reference Home</i>	<i>As Designed</i>	<i>Difference</i>	<i>% Difference</i>
Carbon Dioxide (CO2) - tons/year	30.1	12.4	-17.7	-58.8%
Sulfur Dioxide (SO2) - lbs/year	483.3	199.1	-284.2	-58.8%
Nitrogen Oxides (NOx) - lbs/year	112.8	46.5	-66.3	-58.8%

Emissions By End-Use

(All Electric Reference Home versus As Designed)

	CO2-tons/yr		SO2-lbs/yr		NOx-lbs/yr	
	<i>Ref</i>	<i>Des</i>	<i>Ref</i>	<i>Des</i>	<i>Ref</i>	<i>Des</i>
Heating	12.7	1.3	203.2	20.9	47.4	4.9
Cooling	2.4	0.6	38.1	9.1	8.9	2.1
Water Heating	4.0	1.5	63.7	23.8	14.9	5.6
Lights & Appliances	11.1	9.1	178.3	145.4	41.6	33.9
Photovoltaics	0.0	0.0	0.0	0.0	0.0	0.0

The energy and emission values are calculated by comparing the Rated Home to an all-electric version of the Reference Home as defined in the "Mortgage Industry National Home Energy Rating Systems Standards" as promulgated by the Residential Energy Services Network (RESNET). Site-to-source multipliers and air emission data were taken from the US EPA eGRID2007 database.

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Builder's Name:	Jason Morosko		
Weather Site:	Athens, OH	Rating Type:	Confirmed Rating
File Name:	Morosko.blg	Rating Date:	4/20/11

Whole House Infiltration	Blower door test	
	Heating	Cooling
Natural ACH:	0.03	0.03
ACH @ 50 Pascals:	0.52	0.52
CFM @ 25 Pascals:	197	197
CFM @ 50 Pascals:	309	309
Eff. Leakage Area: [sq.in]	17.0	17.0
Specific Leakage Area:	0.00003	0.00003
ELA/100 sf shell: [sq.in]	0.21	0.21

Duct Leakage	Leakage to Outside Units
	CFM @ 25 Pascals:
	CFM25 / CFMfan:
	CFM25 / CFA:
	CFM per Std 152:
	CFM per Std 152 / CFA:
	CFM @ 50 Pascals:
	Eff. Leakage Area: [sq.in]
	Thermal Efficiency:
	Total Duct Leakage Units
	Total Duct Leakage:

Ventilation	Mechanical:	Balanced
	Sensible Recovery Eff. (%):	83.0
	Total Recovery Eff. (%):	53.0
	Rate (cfm):	76
	Hours/Day:	24.0
	Fan Watts:	48.0
	Cooling Ventilation:	Natural Ventilation

ASHRAE 62.2 - 2010 Ventilation Requirements

For this home to comply with ASHRAE Standard 62.2 - 2010 Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings, a minimum of 76 cfm of mechanical ventilation must be provided continuously, 24 hours per day. Alternatively, an intermittently operating mechanical ventilation system may be used if the ventilation rate is adjusted accordingly. For example, a 151 cfm mechanical ventilation system would need to operate 12 hours per day, as long as the system operates to provide required average ventilation once each hour.

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Weather Site:	Athens, OH	Rating Type:	Confirmed Rating
File Name:	Morosko.blg	Rating Date:	4/20/11

Whole House Infiltration	Blower door test	
	Heating	Cooling
Natural ACH:	0.02	0.02
ACH @ 50 Pascals:	0.37	0.37
CFM @ 25 Pascals:	142	142
CFM @ 50 Pascals:	223	223
Eff. Leakage Area: [sq.in]	12.2	12.2
Specific Leakage Area:	0.00002	0.00002
ELA/100 sf shell: [sq.in]	0.15	0.15

Duct Leakage	Leakage to Outside Units
	CFM @ 25 Pascals:
	CFM25 / CFMfan:
	CFM25 / CFA:
	CFM per Std 152:
	CFM per Std 152 / CFA:
	CFM @ 50 Pascals:
	Eff. Leakage Area: [sq.in]
	Thermal Efficiency:
	Total Duct Leakage Units
	Total Duct Leakage:

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	Heating	Cooling
Natural ACH:	0.04	0.03
ACH @ 50 Pascals:	0.66	0.66
CFM @ 25 Pascals:	252	252
CFM @ 50 Pascals:	395	395
Eff. Leakage Area: [sq.in]	21.7	21.7
Specific Leakage Area:	0.00004	0.00004
ELA/100 sf shell: [sq.in]	0.27	0.27

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	CFM25 / CFMfan:
	CFM25 / CFA:
	CFM per Std 152:
	CFM per Std 152 / CFA:
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