

Craftworks

at cool spring

www.craftworksatcoolspring.com

West Virginia's Most Energy Efficient Structure?

Come and see for yourself!



Craftworks New Cool Spring Studio Open House

Saturday, September 17

1:00-4:00pm

1469 Lloyd Rd Charles Town WV

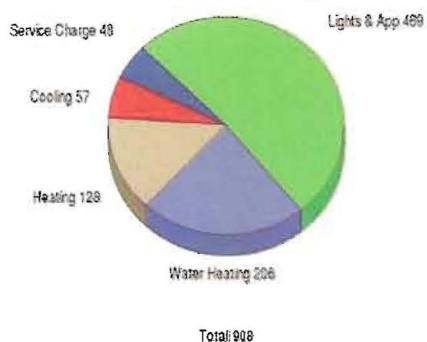
Special Features Include:

- Structural Insulated Panels
- Heinzmann Tilt/Turn Windows
- Mitsubishi Mini Split System
- UltimateAir Energy Recovery System
- Destratification Fan
- ECOP™ Energy Monitoring System

The 2040 sq ft Cool Springs Studio received an Energy Star 5 Star Plus Confirmed Rating.

*In addition, the Studio registered 0.54 ACH@50 pascal, achieving the air-tightness metric specified by passive house structures. **Heating and cooling cost** for Craftworks at Cool Springs Studio is calculated to be **\$185.00 annually!***

Cool Springs Studio Annual Energy Costs (\$/year)



Energy Performance Testing by
Home Efficiency Solutions, LLC
(304) 676-8892
www.homeenergysolutionsllc.com



ACTION REPORT

Date: August 04, 2011

Rating No.: HESr-0005

Building Name:

Rating Org.: Home Efficiency Solutions LLC

Owner's Name: PanelWrights, LLC

Phone No.: (304) 676-8892

Property: 1735 Lloyd Road

Rater's Name: Randy Swartz

Address: Charles Town, WV 25414

Rater's No.: 3413864

Builder's Name: PanelWrights, LLC

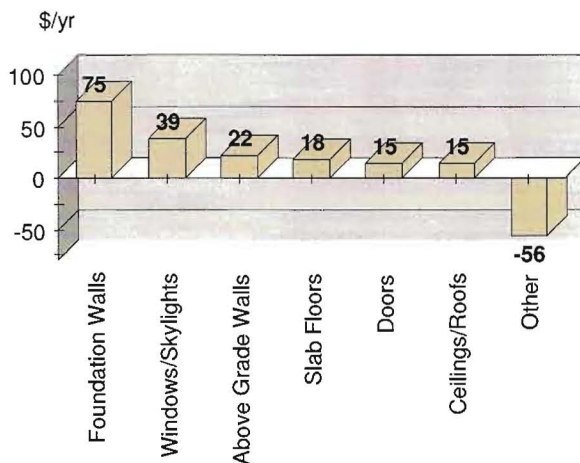
Weather Site: Sterling, VA

Rating Type: Confirmed Rating

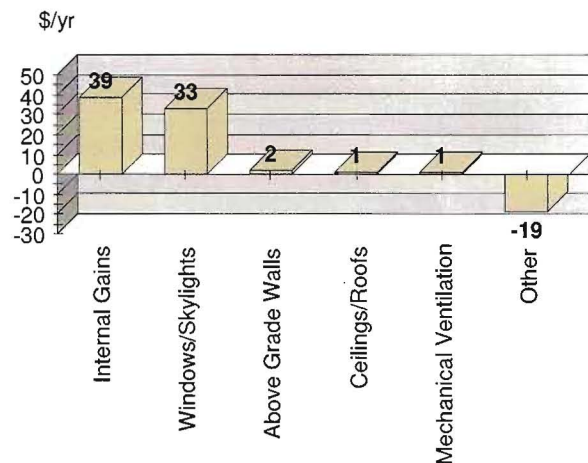
File Name: HESr_0005 PanelWrights.blg

Rating Date: June 6, 2011

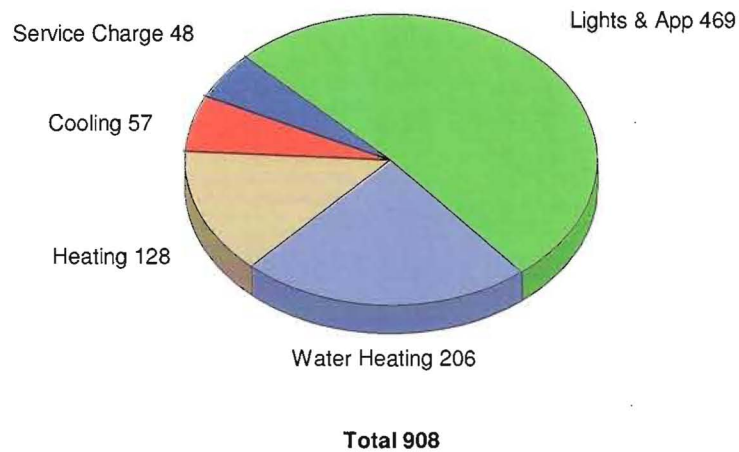
Heating Cost (\$/yr)



Cooling Cost (\$/yr)



Annual Energy Cost (\$/yr)



REM/Rate - Residential Energy Analysis and Rating Software v12.95

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AIR LEAKAGE REPORT

Date:	August 04, 2011	Rating No.:	HESr-0005
Building Name:		Rating Org.:	Home Efficiency Solutions LLC
Owner's Name:	PanelWrights, LLC	Phone No.:	(304) 676-8892
Property:	1735 Lloyd Road	Rater's Name:	Randy Swartz
Address:	Charles Town, WV 25414	Rater's No.:	3413864
Builder's Name:	PanelWrights, LLC		
Weather Site:	Sterling, VA	Rating Type:	Confirmed Rating
File Name:	HESr_0005 PanelWrights.blg	Rating Date:	June 6, 2011

Whole House Infiltration

	Blower door test	
	Heating	Cooling
Natural ACH:	0.03	0.02
ACH @ 50 Pascals:	0.57	0.57
CFM @ 25 Pascals:	129	129
CFM @ 50 Pascals:	203	203
Eff. Leakage Area: [sq.in]	11.1	11.1
Specific Leakage Area:	0.00004	0.00004
ELA/100 sf shell: [sq.in]	0.24	0.24

Total Duct Leakage to Outside

Duct Leakage 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:

Ventilation

Mechanical:	Balanced
Sensible Recovery Eff. (%):	96.0
Total Recovery Eff. (%):	95.0
Rate (cfm):	200
Hours/Day:	24.0
Fan Watts:	70.0
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 43 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 86 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.

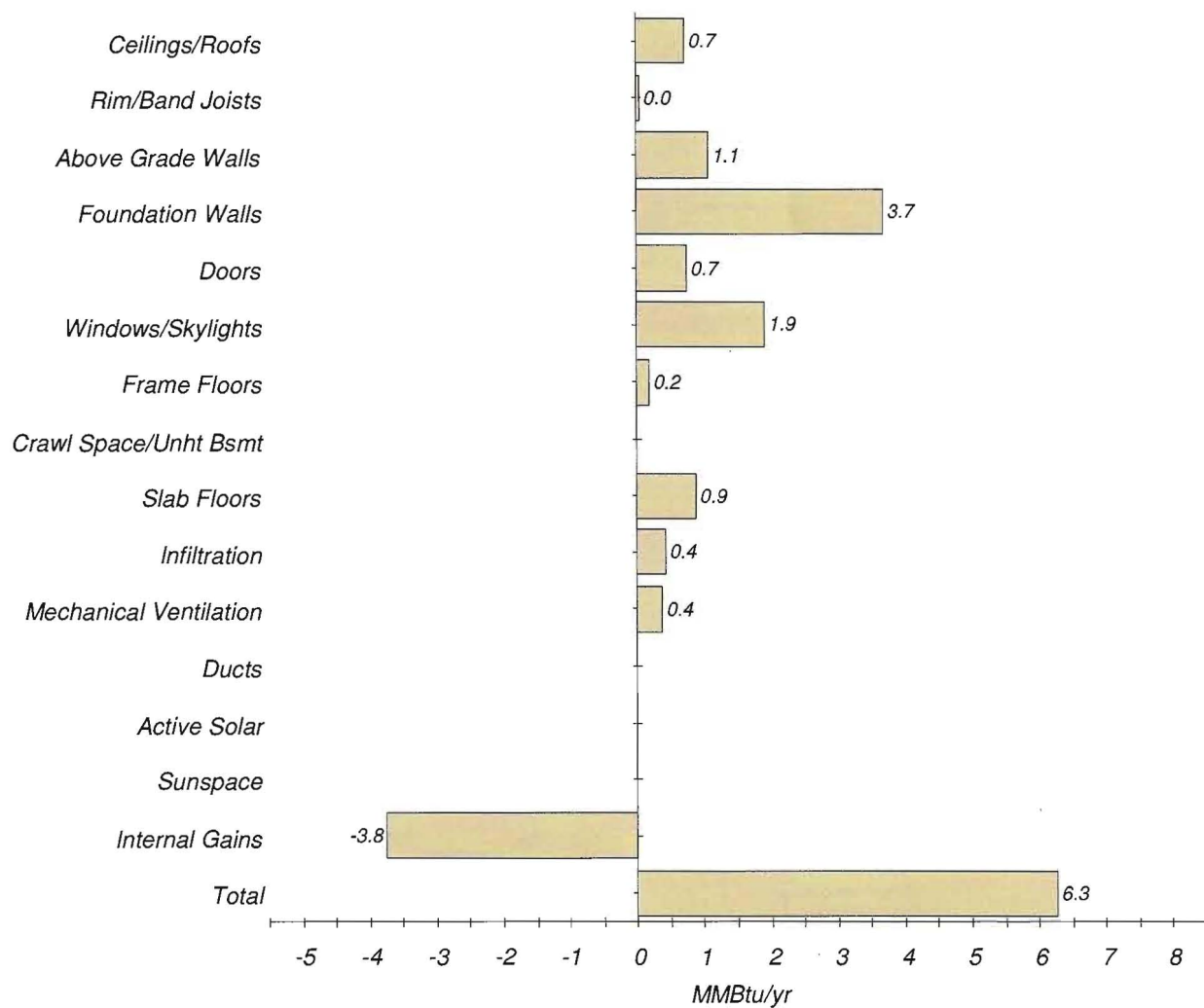
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COMPONENT CONSUMPTION SUMMARY

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Heating Season



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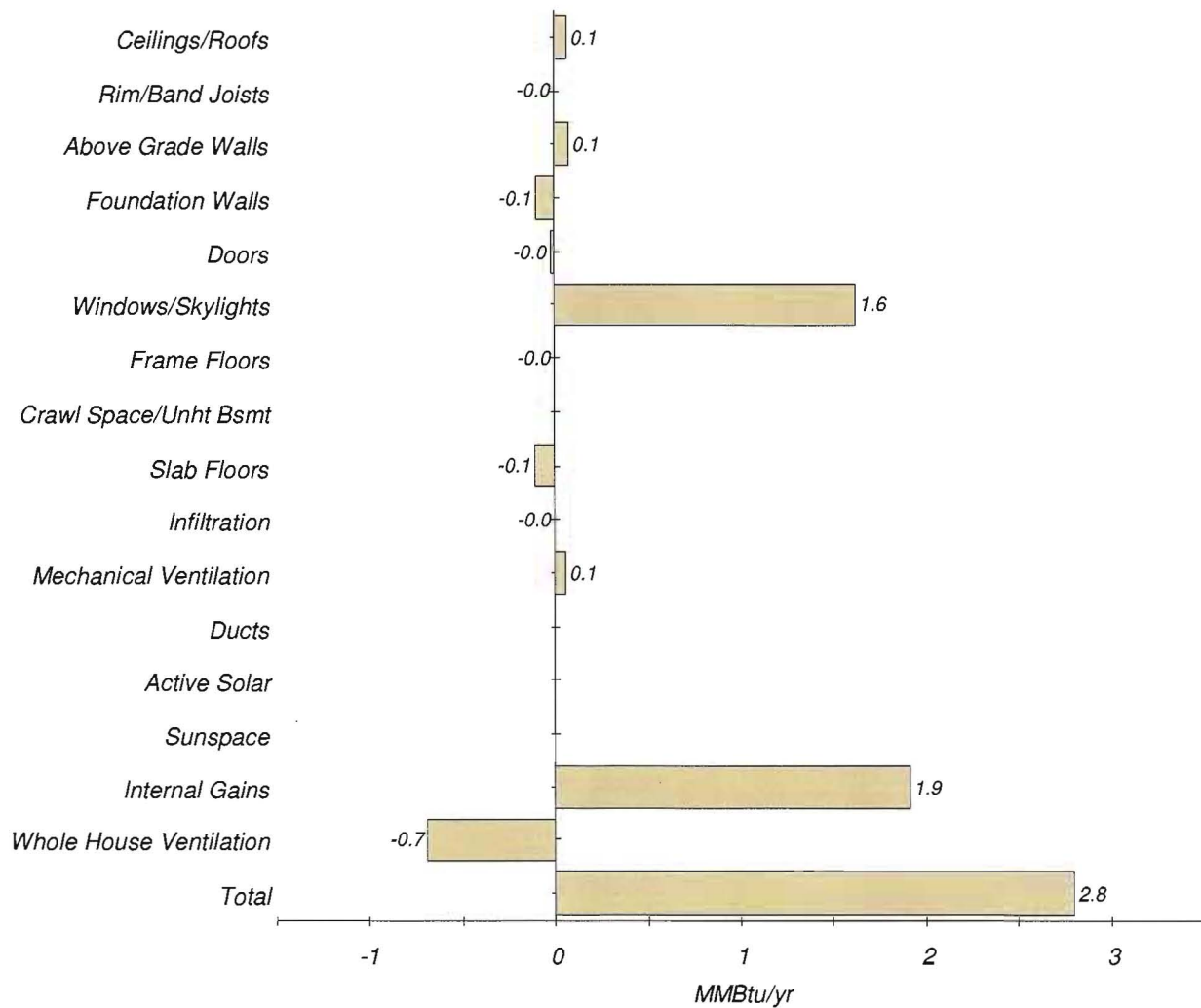
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COMPONENT CONSUMPTION SUMMARY

HESr_0005 PanelWrights.blg

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Cooling Season



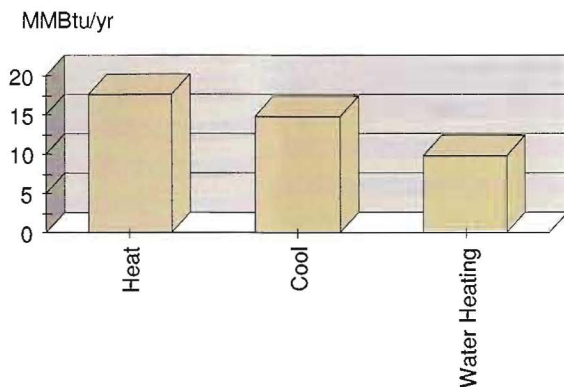
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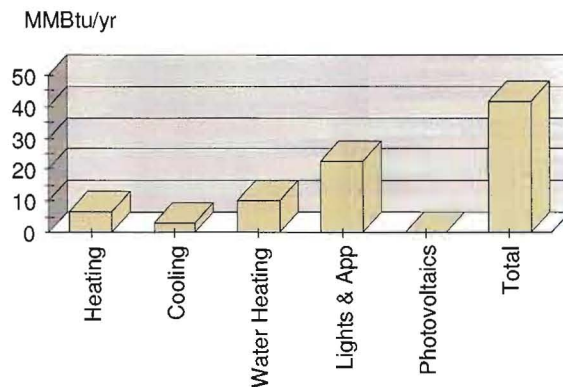
PERFORMANCE SUMMARY

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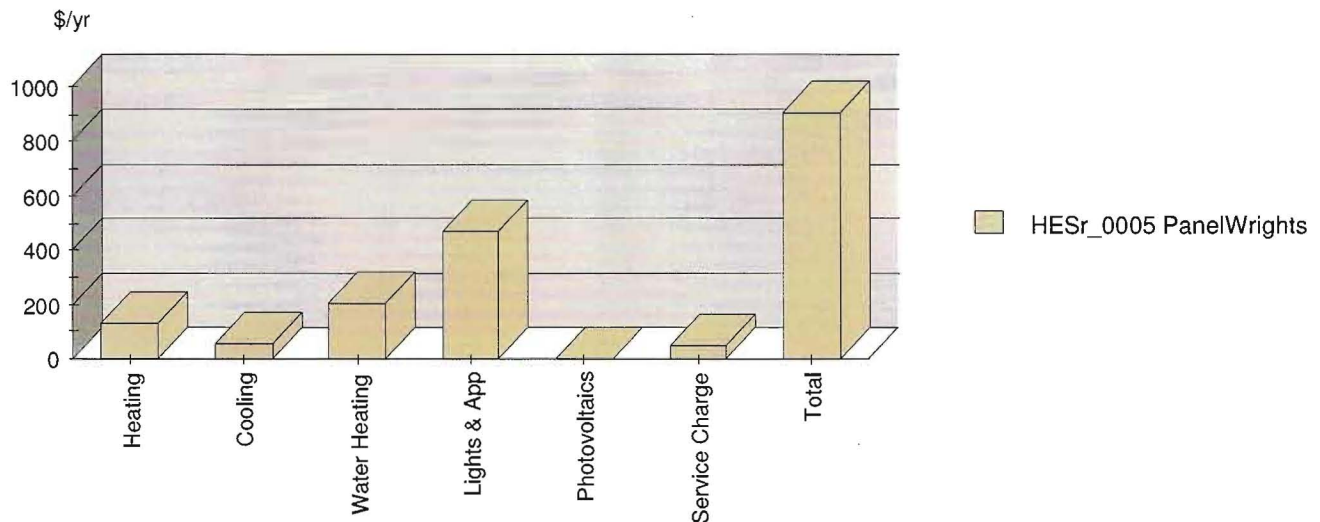
Annual Load



Annual Consumption



Annual Energy Cost



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PERFORMANCE SUMMARY

HESr_0005 PanelWrights.blg

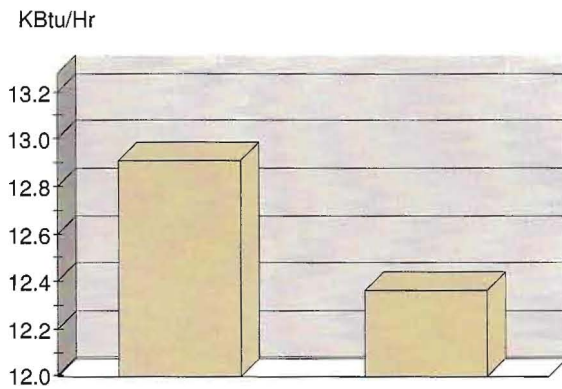
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Design Loads

Utility Rates:

Electricity:

Allegheny Power



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SOURCE ENERGY & EMISSIONS REPORT

Date:	August 04, 2011	Rating No.:	HESr-0005
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Builder's Name:	PanelWrights, LLC		
Weather Site:	Sterling, VA	Rating Type:	Confirmed Rating
File Name:	HESr_0005 PanelWrights.blg	Rating Date:	June 6, 2011

Source Energy Consumption (MMBtu/year)

All Electric

	<i>Reference Home</i>	<i>As Designed</i>	<i>Difference</i>	<i>% Difference</i>
Heating:	78.1	20.0	-58.1	-74.4%
Cooling:	23.8	8.3	-15.5	-65.1%
Water heating:	37.1	36.1	-1.1	-2.9%
Lights & Appliances:	97.3	82.2	-15.0	-15.5%
Photovoltaics:	0.0	0.0		
Total:	236.3	146.6	-89.7	-38.0%

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	11.1	6.9	-4.2	-38.0%
Sulfur Dioxide (SO2) - lbs/year	110.8	68.7	-42.1	-38.0%
Nitrogen Oxides (NOx) - lbs/year	34.4	21.4	-13.1	-38.0%

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	3.7	0.9	36.6	9.4	11.4	2.9
Cooling	1.1	0.4	11.2	3.9	3.5	1.2
Water Heating	1.7	1.7	17.4	16.9	5.4	5.3
Lights & Appliances	4.6	3.9	45.6	38.6	14.2	12.0
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.



An ENERGY STAR® Version 2 Qualified Home

This home built at

1735 Lloyd Road, Charles Town, WV

by PanelWrights, LLC

and verified by Home Efficiency Solutions LLC

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 Score: 49

August 01, 2011

www.energystar.gov

Sam Rashkin
National Director
ENERGY STAR for Homes