



Home Energy Analysis

Rater P Harding

Date

Rating #

File:

Address 39 Woodpond Rd

Owner

Builder

Conditioned Area (sf)	3,192
# Bedrooms	3
HERS Index	54
Rating Type	Projected
Energy Star	Pass

Energy Efficient Home Tax Credit Status: Pass			
MMBtu/year	Target Load	Design Load	Difference
Heating	42.5	39.0	(3.5)
Cooling	13.8	13.2	(0.6)
Total	56.3	52.2	(4.1)

Annual Energy Cost Projections						
	Load (MMBthu/year)	Consumption (MMBthu/year)	Annual Cost (\$)	Annual Savings (\$)	Reference Home Cost (\$)	Annual Savings (%)
Heating	66.2	70.1	1,215	1,013	2,228	45.5%
Cooling	18.3	4.5	239	251	490	51.2%
Hot Water	12.3	13.4	227	145	372	39.0%
Lights/Appliances	31.3	31.3	1,651	121	1,772	6.8%
Photovoltaics					-	0.0%
Total	128.1	119.3	3,332	1,530	4,862	31.5%

Actual energy costs and savings may differ considerably from above projections depending on number, lifestyle and habits of occupants. Percentage reductions provide a reasonable estimate of savings for a given household.

Mortgage Interest Rate	5.5%	Annual Energy Cost Inflation	5.0%
Marginal Tax Rate	30.0%	Capitalized Annual Savings	\$ 52,087

Capitalized Annual Savings is NPV of Annual Savings including inflation for 30 years discounted at after-tax mortgage rate

Utility Rates	Electric	0.18 \$/kwh	N Gas	1.35 \$/100cf	Propane	2.50 \$/gal	Oil	2.25 \$/gal
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Annual Load by Building Component (MMBthu/year)			
Heating		Cooling	
Component	Load	Component	Load
Unhtd basement	21.5	Internal gains	15.0
AG walls	15.4	Windows	14.1
Windows	13.8	Ducts	1.4
Mech ventilation	9.9		
Infiltration	8.8	Mech ventilation	(1.2)
Ceilings	7.3	Unhtd basement	(3.3)
All other	5.9	Nat ventilation	(7.4)
Internal Gains	(16.4)	All other	(0.3)
Total	66.2	Total	18.3

Equipment Sizing Summary	
Heating	MBtuh/hr
Peak Load	44.9
Spec Cap	75.0
Load/Cap	59.9%
Cooling	MBtuh/hr
Peak Load	29.5
Spec Cap	42.0
Load/Cap	70.2%

Infiltration Losses		Duct Losses		Ventilation	
	Heating	Cooling	Duct Leakage to Outside	Required* (CFM)	
ACH Nat	0.24	0.18	CFM@25 Pascals	-	Specified (CFM) 64
CFM@50 Pascals	1,700	1,700	CFM25/100sf	-	Specified (hrs) 24.0
CFM50/SF	0.53	0.53	ELA		Sensible Recovery 0%
ELA	93.3	93.3			Total Recovery 0%
ELA/100sf shell	1.02	1.02			

*ASHRAE 62.2 -2003 defines minimum 24 hr continuous ventilation rate

Building Specifications						
Thermal Envelope (dominant type if more than one)						
	Type	U	R			
Ceiling - Flat	R 50 blown FG		-	Basement Type	semi conditioned	
Ceiling - Vaulted	R 38 blown FG		-	Window/Wall Ratio		
AG Walls	R22 BIFG + R7RFB		-	Mechanicals		
Foundation Walls	R11 draped batt		-	Heating	95.4 AFUE 75 kBtuh nat gas hydroair	
Frame Floors	R 0		-	Cooling	15 SEER 42 kBtuh AC	
Slab Floors			-	DHW	0.87 EF indirect tank	
Windows	Double/LowE/Argon	0.280	3.6	PV		

Notes