

IMPROVEMENT ANALYSIS REPORT

Date: June 08, 2010

Rating No.:

Building Name:

Rating Org.: Evergreen Energy Consulting

Owner's Name:

Phone No.: 360-815-5085

Property:

Rater's Name: Ben Freeman

Address: Seattle, WA 98118

Rater's No.: BF5085

Builder's Name:

Weather Site: Seattle, WA

Rating Type: Confirmed Rating

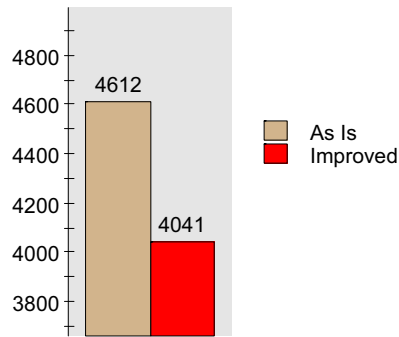
File Name: .blg

Rating Date: 6/7/2010

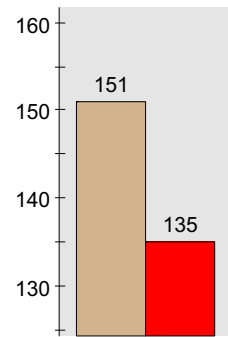
Energy Costs (\$/yr)

End-Use	As Is	With All Improvements	Savings
Heating	3275	2705	570
Cooling	0	0	0
Hot Water	434	433	0
Lights and Appliances	821	821	1
Photovoltaics	-0	-0	0
Service Charge	84	84	0
TOTAL	4614	4043	571

Total Costs (\$/yr)



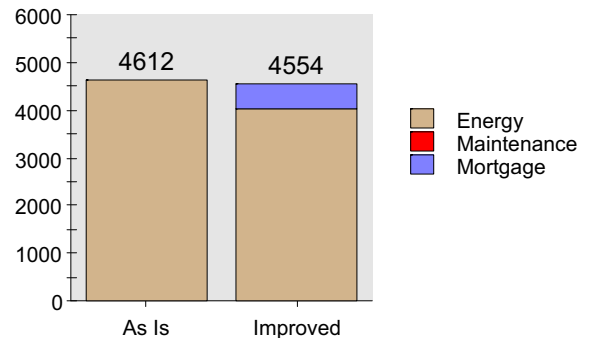
HERS Index



Information For Lenders and Appraisers

Installed Cost of Improvements (\$)	8000
Cost Weighted Life of Measure (Years)	15
Mortgage Term (Years)	30
Discount/Mortgage Rate (%)	4.875
Present Value Factor	10.5
Expected Annual Energy Savings (\$)	571
Expected Annual Maintenance Costs (\$)	0
Expected Annual Savings (\$)	571
Increased Annual Mortgage Costs (\$)	513
Present Value of Savings (\$)	5978
Expected Annual Cash Flow (\$)	58

Cost Comparison (\$/yr)



REM/Rate - Residential Energy Analysis and Rating Software v12.7

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

Component	Life	Cost	Yr Savings	SIR	PV	SP	Index
1. Window 4: Front	15	800	113	1.5	380	7.10	148
Existing: Single - Metal							
Proposed: Dbl/LoE/Arg - Vinyl							
Measure: Replace Windows							
2. Window12: Left	15	800	106	1.4	307	7.56	145
Existing: Single - Metal							
Proposed: Dbl/LoE/Arg - Vinyl							
Measure: Replace Windows							
3. Window 5: Right	15	800	88	1.1	120	9.11	142
Existing: Single - Metal							
Proposed: Dbl/LoE/Arg - Vinyl							
Measure: Replace Windows							
4. Window 6: Right	15	800	59	0.8	-187	13.66	141
Existing: Single - Metal							
Proposed: Dbl/LoE/Arg - Vinyl							
Measure: Replace Windows							
5. Window 7: Back	15	800	51	0.7	-268	15.74	139
Existing: Single - Metal							
Proposed: Dbl/LoE/Arg - Vinyl							
Measure: Replace Windows							
6. Window10: Left	15	800	47	0.6	-307	16.98	138
Existing: Single - Metal							
Proposed: Dbl/LoE/Arg - Vinyl							
Measure: Replace Windows							
7. Window 9: Back	15	800	37	0.5	-417	21.89	137
Existing: Single - Metal							
Proposed: Dbl/LoE/Arg - Vinyl							
Measure: Replace Windows							
8. Window11: Left	15	800	30	0.4	-482	26.31	136
Existing: Single - Metal							
Proposed: Dbl/LoE/Arg - Vinyl							
Measure: Replace Windows							
9. Window 8: Back	15	800	23	0.3	-559	34.76	135
Existing: Single - Metal							
Proposed: Dbl/LoE/Arg - Vinyl							
Measure: Replace Windows							
10. Window 1: Front	15	800	18	0.2	-609	43.87	135
Existing: Single - Metal							
Proposed: Dbl/LoE/Arg - Vinyl							

IMPROVEMENT ANALYSIS REPORT

BF5085

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Component	Life	Cost	Yr Savings	SIR	PV	SP	Index
Measure: Replace Windows							

Criteria

Ranking Criteria: SIR	Maximum \$ Limit: No Limit
Cutoff: 0	Measures: Interactive

The home's energy efficiency is rated using the HERS Index as defined in the RESNET "Mortgage Industry National Home Energy Rating Systems Accreditation Standards," 2006. An Index of 100 represents a home that meets current energy codes. A lower Index indicates the home uses less energy than a code home, a higher Index indicates the home uses more energy than a code home. The rating considers all energy use in the home. The rating should be used only for comparison, since it assumes average climate and thermostat settings, quantities of hot water, and internal loads for a typical household. Energy costs are based on local energy prices at the time of rating. If energy efficiency improvements are made to the home, or energy prices change significantly, the rating and annual energy costs may change. Although every effort has been made to provide accurate information, this rating does not constitute a warranty, expressed or implied, about the energy efficiency or operating costs of the house. Estimated savings are calculated assuming that the improvements are implemented in the order listed, and in accordance with all local codes and standards. The cost estimates for improvements are established by the local HERS provider.

Home Energy Retro-Fit

Seattle, WA 98118

by:
Ben Freeman
Evergreen Energy Consulting
360-815-5085

June 08, 2010

Home Energy Retro-Fit

The Home Energy Retro-Fit report lists changes, or retrofits, that you can make to your home to save energy and money. Acting on the energy retrofit recommendations will make your home more comfortable, more valuable, and more affordable.

Evergreen Energy Consulting recommends these retrofits, based on data gathered in a detailed inspection of your home. If you desire more detail on the retrofits or the cost estimates, contact Evergreen Energy Consulting, which provided you this service.

Energy Retro-Fit Table

The Energy Retro-Fit table shows a package of energy retrofits for you to consider. Both the individual and total annual savings are based on the whole package. You can see how good of a financial choice these measures are by looking at the last column.

Feature to improve	Change from	Change to	Estimated cost	Annual savings	SP*
Window:	Single - Metal	DbI/LoE/Arg - Vinyl	\$800	\$113	7.10
Window:	Single - Metal	DbI/LoE/Arg - Vinyl	\$800	\$106	7.56
Window:	Single - Metal	DbI/LoE/Arg - Vinyl	\$800	\$88	9.11
Window:	Single - Metal	DbI/LoE/Arg - Vinyl	\$800	\$59	13.66
Window:	Single - Metal	DbI/LoE/Arg - Vinyl	\$800	\$51	15.74
Window:	Single - Metal	DbI/LoE/Arg - Vinyl	\$800	\$47	16.98
Window:	Single - Metal	DbI/LoE/Arg - Vinyl	\$800	\$37	21.89
Window:	Single - Metal	DbI/LoE/Arg - Vinyl	\$800	\$30	26.31
Window:	Single - Metal	DbI/LoE/Arg - Vinyl	\$800	\$23	34.76
Window:	Single - Metal	DbI/LoE/Arg - Vinyl	\$800	\$18	43.87
Total			\$8000	\$571	
Monthly Finance Cost**, Monthly Savings			\$43	\$48	

* SP is Simple Payback: the number of years until the retrofit has paid for itself.

** The monthly finance cost is the monthly payment, including interest, that will pay for all the tabulated improvements when financed with a 30-year mortgage at 4.88%.

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Energy Costs by End-Use

The Energy Costs table compares the "before" and "after" annual energy costs to show energy cost savings. It groups retrofits by "end-uses," which are broad categories of how energy is used (or generated) in a home. Note that Photovoltaic panels (PV) generate energy, so as a result this "end-use" shows negative costs, if present.

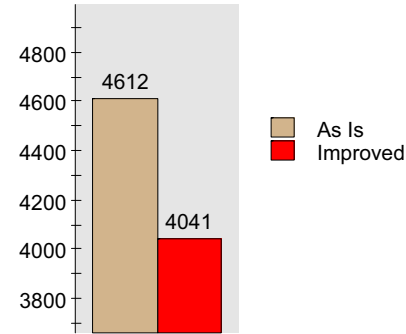
The Total Costs bar chart gives a visual sense of how the annual operating costs of your house could change by incorporating all the listed energy retrofits.

The HERS Index bar chart provides a snapshot of your home's energy efficiency before and after retrofits. The HERS Index shows the energy efficiency rating of your home, similar to the way a miles per gallon rating shows the efficiency for a car.

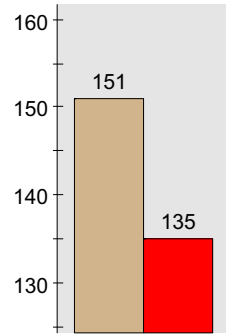
Energy Costs (\$/year)

End-Use	As Is	With All Improvements	Savings
Heating	3275	2705	570
Cooling	0	0	0
Hot Water	434	433	0
Lights and Appliances	821	821	1
Photovoltaics	-0	-0	0
Service Charge	84	84	0
TOTAL	4614	4043	571

Total Costs (\$/year)

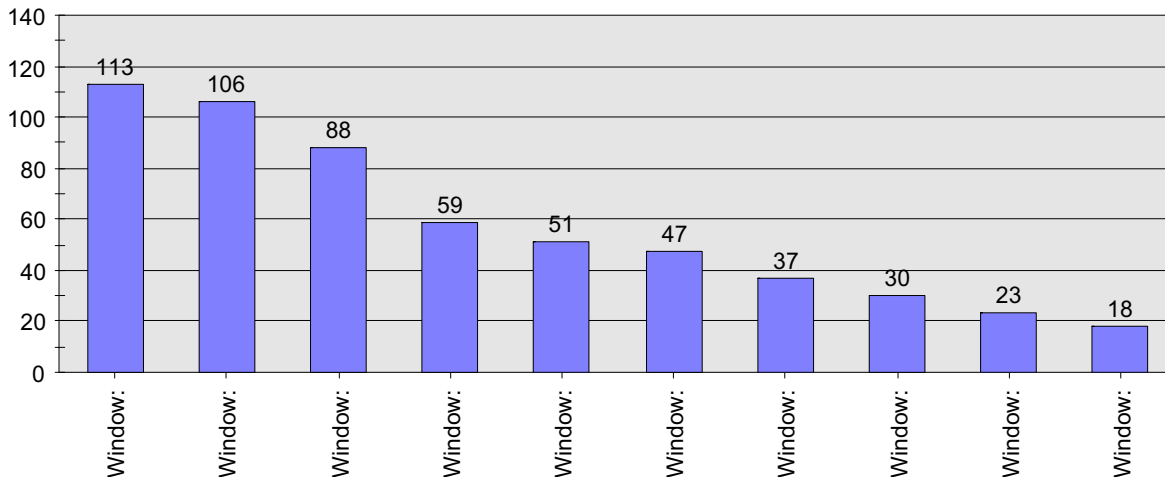


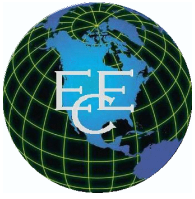
HERS Index



The bar chart below displays the annual energy cost savings (\$ per year) associated with the energy retrofits you choose. Some retrofits interact with one another, and the total savings offered by each can change if the package of combined retrofits changes. For example, if you increase the insulation of your home, the energy savings you can gain from installing a more efficient furnace will be less than if you only install the furnace. However, the total savings will be greater if you choose both retrofits.

Annual Savings for Retrofits (\$/year)





FHA EEM CERTIFICATE

Date:	June 08, 2010	Rating No.:	
Building Name:		Rating Org.:	Evergreen Energy Consulting
Owner's Name:		Phone No.:	360-815-5085
Property:		Rater's Name:	Ben Freeman
Address:	Seattle, WA 98118	Rater's No.:	BF5085
Builder's Name:			
Weather Site:	Seattle, WA	Rating Type:	Confirmed Rating
File Name:	.blg	Rating Date:	6/7/2010

Existing Conditions

Ceiling w/Attic:	R-6 Foam U=0.162	Infiltration:	Htg: 1884 Clg: 1884 CFM50
Vaulted Ceiling:	None	Infilt. Measure:	Blower door test
Above Grade Walls:	Uninsulated Stud U=0.267	Interior Mass:	None
Foundation Walls:	Uninsulated	Ducts:	Uninsulated
Doors:	1-3/4 Wd solid core U=0.329	Active Solar:	None
Windows:	Single - Metal U=1.310	Photovoltaics:	None
Frame Floors:	None	Sunspace:	No
Slab Floors:	Uninsulated U=0.365		
Mechanical Equip:	Water Heating: Conventional, Elec, 0.82 EF.		
Mechanical Equip:	Heating: Fuel-fired air distribution, 105.0 kBtuh, 80.0 AFUE.		

Recommended Improvements Component

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Energy Costs (\$/yr)	With All		Savings
	As Is	Improvements	
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Cooling	0	0	0
Hot Water	434	433	0
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Service Charge	84	84	0
Total	4614	4043	571
HERS Index	151 ***	135 ***+	

Information For Lenders and Appraisers	
Installed Cost of Improvements	8000
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Present Value Factor	10.5
Expected Annual Energy Savings	571
Expected Annual Maintenance Costs	0
Expected Annual Savings	571
Increased Annual Mortgage Costs	513
Present Value of Savings	5978
Expected Annual Cash Flow	58

'I certify, that to the best of my knowledge and belief, the information contained in this report is true and accurate and I understand that the information in this report may be used in connection with an application for an energy efficient mortgage to be insured by the Federal Housing Administration of the United States Department of Housing and Urban Development.'

Signature of Rater(s)

Printed Name of Rater(s)

Date

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Energy Report

For Fannie Mae Desktop Underwriter®

Use this Energy Report to show the Energy Savings (for underwriting purposes in accordance with the requirements of the Energy Efficient Mortgage product) to determine the Energy Savings related to the property. This Report is to be completed by the Energy Rater and submitted to the Lender. This Report must be retained by the Lender in the Loan File.

Borrower Name(s): _____

Property Address: _____

Energy Savings

Monthly Energy Savings 48

Enter Monthly Energy Savings Value into Section V "Monthly Income and Combined Housing Expense Information" in Desktop Underwriter®.

Energy Value

New Homes or Energy Efficient Existing Homes

Energy Savings Value 5978

Enter Energy Savings Value into "Additional Data" in the Desktop Underwriter® screen by adding this value to appraised value.

OR

Energy Improvements to Existing Homes

Energy Savings Value 8000

Enter into Section VII "Details of Transaction". Add to Line B "Alterations, improvements, repairs"

AND

Enter Energy Savings Value into "Additional Data" in the Desktop Underwriter® screen by adding this value to appraised value.

Rater's/Provider's Signature	
Date	