



An Alaska Case Study Using Big Data

Session 2 – Day 2

Presented by

Sandra K. Adomatis, SRA, LEED Green Assoc.



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Objectives

- **Identify the benefits of energy upgrades**
- **Apply tools and data to marketing and appraisal methodology**
- **Describe review areas of an appraisal report**



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Do buyers in Alaska care about energy costs?



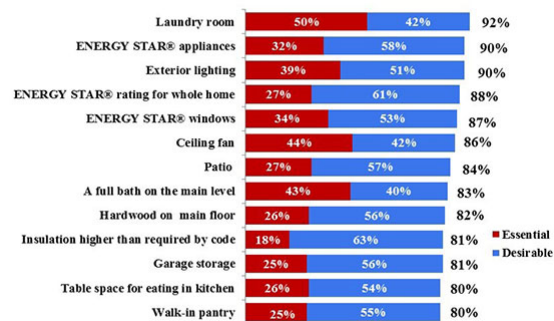
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NAHB 2016 Survey of Buyers Preferences Across the Generations

The Most Wanted List (% of all respondents)



Source: NAHB, 2016 Housing Preferences of the Boomer Generation: How They Compare to Other Home Buyers

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Keep the top 3 reasons consumers get involved in Energy Efficiency in mind.

Saves Money



Healthier



Comfort



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Poll Question

What is your profession?

- 1.) Retrofit contractor**
- 2.) Energy or Green Rater**
- 3.) BPI**
- 4.) Builder**
- 5.) Real estate agent or appraiser**
- 6.) Lender**



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Appraisal Specifics

New 2017 Study

Appraisals for unique or odd lots take nearly 50% longer than a standard appraisal, while a short turn around appraisal on average must be completed in half the time-frame of a standard appraisal and accounted for 10.8% of volume.

	Time frame given by lender for completion (Days)	Time taken to Complete (Hours)	Compensation Per Appraisal (% of overall weighted average)	Share of annual appraisal volume (%)
Standard property	7.3	10.6	89.1%	75.6%
Unique or odd lot	9.2	15.4	111.1%	15.5%
Short turn around or time dependent closings (e.g. "rush" jobs)	3.5	9.4	99.8%	10.8%

Appraisers are compensated for the shorter time frame and longer time to complete both "rush" appraisals and "unique or odd lot" appraisals.

Note: Respondents were able to skip question.

2017 Appraiser Trends Study
https://www.scribd.com/document/342075358/Appraiser-Trends-Study-03-16-17#fullscreen&from_embed

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Portrait of the Appraiser

MODEL RESPONSES TO DESCRIPTIVE ITEMS

THE TYPICAL RESPONDENT...

Currently works as an appraiser
Is a Certified Residential Appraiser
Works primarily as a field appraiser
Has worked in the field an average of nearly 22 years
Serves lenders most frequently
Is self-employed
Is likely to stay in the field for at least 5 more years
Intends to work an average of 12 more years
Performed between 300 and 500 appraisals in the past 12 months
Reports stable revenues but increasing costs
Intends to invest in software and technology to reduce cost and improve efficiency
Does mostly residential work
Does not train new appraisers

2017 Appraiser Study
https://www.scribd.com/document/342075358/Appraiser-Trends-Study-03-16-17#fullscreen&from_embed

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Part 1.

The Case Study House Described Before and After Upgrades



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Poll Question

**Do you think a house that has energy
efficient upgrades should sell for more?**



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Why might an appraiser not have accurately valued an energy efficient home.



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Appraiser suffers from the “L” syndrome.

“L”

1. Lack of knowledge of energy efficiency
2. Lack of documentation of energy efficiency
3. Lack of data to support an opinion
4. Lender does not allow energy adjustment

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Lack of knowledge

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Poll Question

Name the tool or electronics you must have to do your job?

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Imagine a carpenter with tools –
no wood



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Appraisers without Big Data are like
carpenters with tools and no wood.



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What Big Data?

- Energy Report
- Green Score Sheet
- AKWarm© Report
- Energy Audit
- Whole House Inspection
- AI Residential Green & Energy Efficient Addendum



Imagine the Accuracy of Valuations if every MLS had "Big Data" attached.

The data is hidden in most markets even from the potential buyers.

Knowledge of how important specific data about a house is to valuing and selling it for the best price is key to changing the market.



Documenting Energy Efficiency

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Builders, Retrofit Contractors, Raters, and Real Estate Agents

How can we document the upgrades to homes so that they are accessible to the real estate community?

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You hold the solution to three “L” syndromes.

Home Performance with ENERGY STAR®
Audit Report

About this home

Year Built: 1850
Number of Bedrooms: 2
Number of Stories: 2
Average Ceiling Height: 8 Ft
Conditioned Floor Area: 1114
Front of House Direction: West



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Because they never saw your report,
their comparables look like this.

Old house built in late
1800s or early 1900s.

High utility bills

Older neighborhood



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The “Comparables” are



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Measurable savings require documentation



Appraisers can't value what they can't measure. We need your reports.



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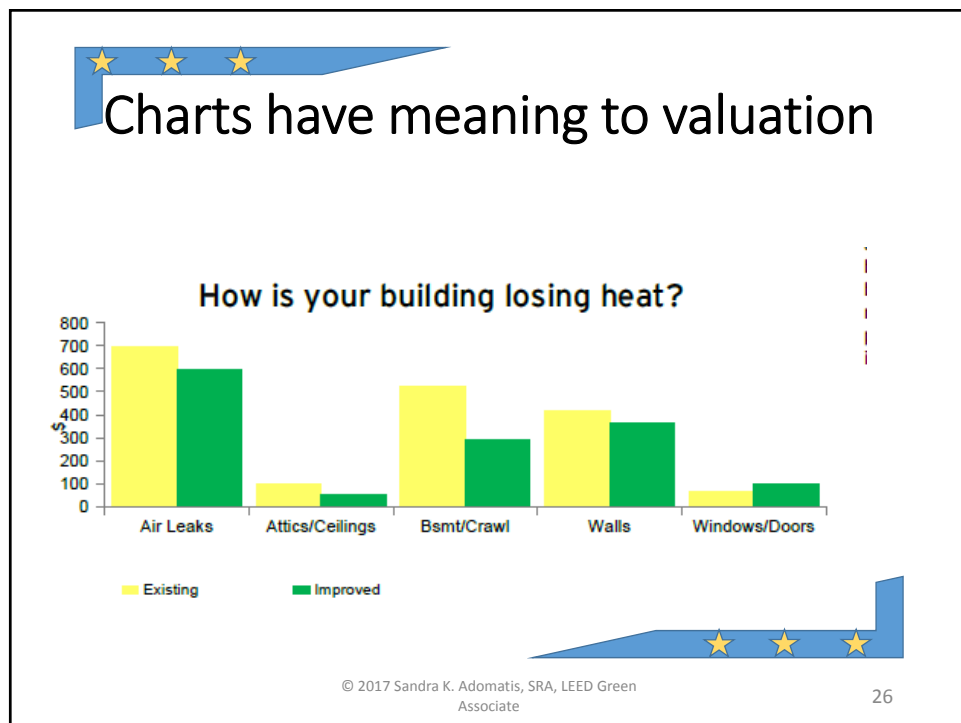
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Sales Comparison Approach

Features	Subject	MLS Sale 1	MLS Sale 2	MLS Sale 3
Sale Date	Today	04/XX	02/XX	03/XX
Living Area	1,114	1,250	900	980
Room Count	5/2/1	5/2/1.5	5/2/1	5/2/1
Basement	Full	Full	Full	Full
Energy Eff.	Average	Average	Average	Average
Sale Price	\$145,000	\$135,000	\$115,000	\$120,000
Days on Mkt	32	40	55	75

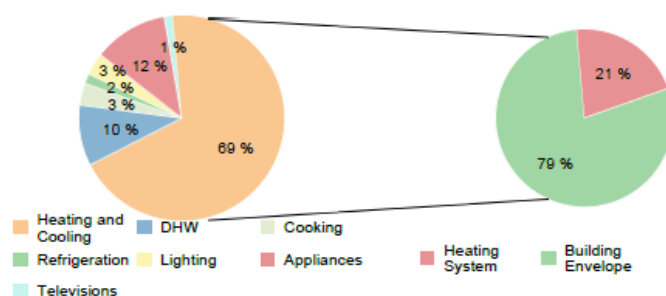
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The chart is meaningful to valuation and comparable selection.

Where does your money go?



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If only the appraiser could see this!



Improvement Projects	Estimated Total Cost	Estimated Incentive	Estimated Annual Savings
Air seal	\$1,504	\$750	\$185
Water heaters-all	\$1,295	-	\$360
Insulate basement	\$1,852	\$281	\$266
Insulate attic	\$463	\$96	\$20
Insulate vault / flat	\$747	\$113	\$29
Insulate walls	\$3,039	\$556	\$112
PV	-	-	-
Windows	\$6,169	-	-\$5
Heating systems-all	\$3,122	\$500	-\$212
Package Total	\$18,192	\$2,295	\$754
Total Package Costs after Incentives:	\$15,897	-	\$754

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Poll Question

- Do home owners care about the period it takes to recoup their investment in energy upgrades?



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Payback period

Improvement Package

With these proposed energy saving measures, you could save an estimated:

\$754/year*
at current energy prices

18 years
total simple payback

4%
Annual Return on
Investment

15,019 lbs
Estimated annual CO₂ (lbs)
savings

These savings are **ESTIMATES ONLY** and can be influenced by many factors such as fuel prices, occupancy, or weather.

Payback

$\$15,897 / \$754 =$
21 years

Return on Investment

$\$754 / \$15,897 =$
4.7%

Transparency

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Previous chart gave data for 2 approaches to valuing energy.

	Cost Approach	Income Approach	Sales Comparison
Improvement Cost	\$15,897		
Paired Data			\$7,250
Energy Savings at \$754 yr – Present Value of energy saved at 4% for 18 years		\$9,545	

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Present Value of Savings

Saving \$754 a year

for 18 years or a total savings (\$13,572)

is worth \$9,545 in today's dollars.

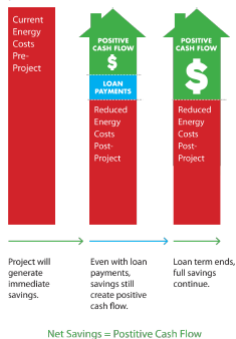
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A look at the cash flow with financing in place.

Desirable Financing Scenario

How you can still save and keep a positive cash flow?



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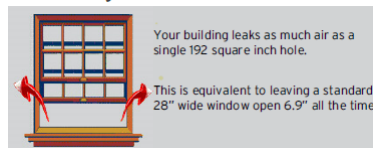
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Improvements to air leaks

Air Leakage Testing		ACH 50*
Current Condition	3420 CFM@50pa	23
Improvement Recommended	30% Leakage Reduction	16.1
Ventilation	Base	Improved
Mechanical	None	None

Meaningful data

*ACH50 (Air changes per hour at 50 Pascals) compares air leakage to the volume of the house. A higher number indicates a leakier house. Standards for new construction often call for 3 to 5 ACH.

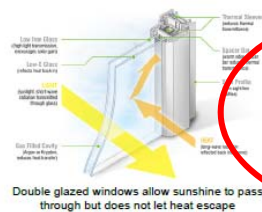


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This section highlights improvements deserving special attention in choosing comparables.

Windows	Base Count	Base Condition	Improved Count	Improved Condition
Window 1	10	Storm, Clear, Aluminum Frame+ Single-Pane, Clear, Wood Frame	12	Double Pane, LowE, Argon, VT RBES



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HVAC is a big investment

OIL FURNACE



Your furnace is at the end of its life. Though still functioning it may be time to consider an energy efficient model.

New Propane Furnace



Switch to an energy star rated condensing Furnace

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Appraiser with the full energy report and knowledge will choose more comparable properties

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Good Data Produces Results

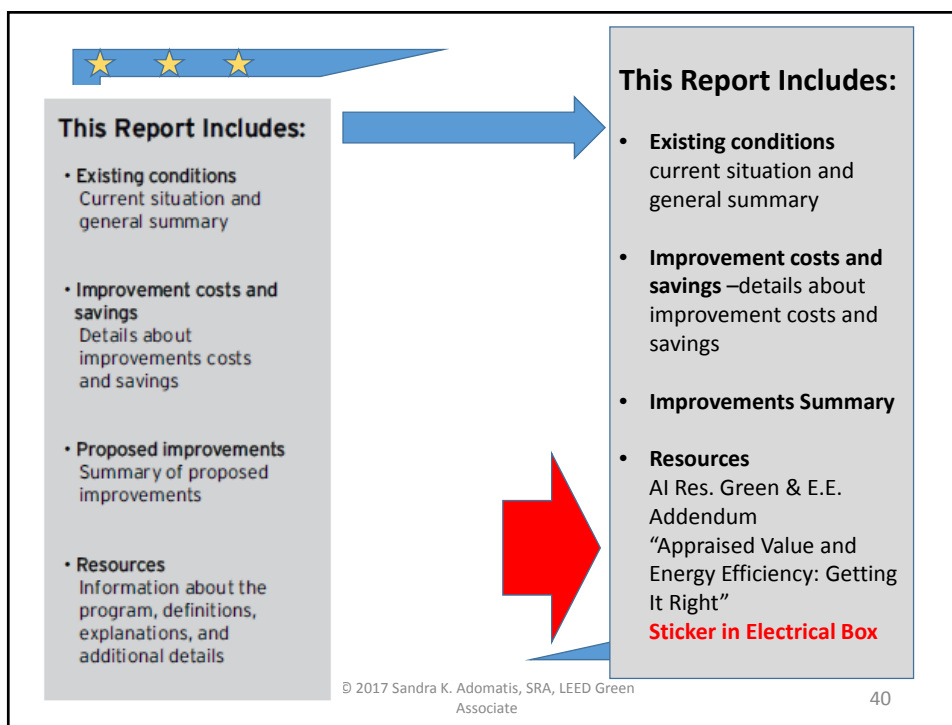
Features	Sale A	Sale B	Adjustments
Sale Price - DOM	\$236,300 – 4 days	\$200,000-4 days	
Sale Date (contract)	10/2011	10/2011	
Lot Size/View	10,000 SF/Res	15,000 SF/Sup	-5000
Style	Ranch	Ranch	
Age	54 yrs	46 yrs	
Gross Living Area/Rooms	2,330 SF (7/4/2)	1,932 SF (6/3/2)	+10000
Parking	2-Carport	2-Car Garage	-5000
Energy Features	5 kW Solar PV & Water Heating Low E Windows Low VOC/Lot Utility	None	
Condition	Updated & energy retrofit & Low Mtce Yd – flat older roof	Average for age New Flat Tile Roof	-5000 for roof
Premium paid for Sale A Updates and Energy Retrofit		\$31,300 or 15%	

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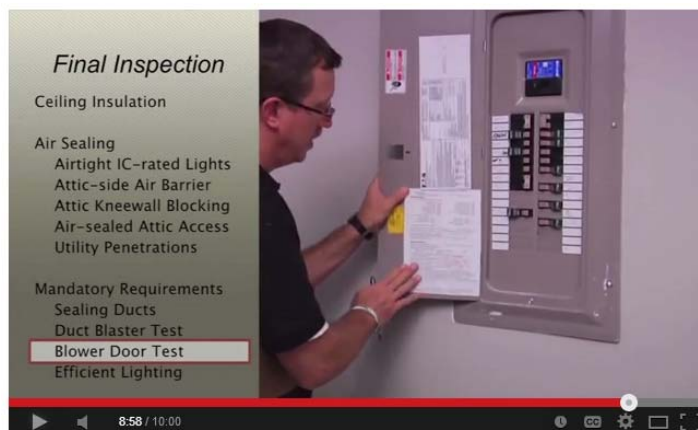
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Sales Comparison Approach				
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Sale Date	Today	04/XX	02/XX	03/XX
Living Area	1,114	1,250	900	980
Room Count	5/2/1	5/2/1.5	5/2/1	5/2/1
Basement	Full	Full	Full	Full
Energy Eff.	Retrofit	Retrofit	Retrofit	Retrofit
Sale Price	\$145,000	\$155,000	\$139,000	\$142,000
Days on Market	32	48	29	60

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Document on site



2012 Georgia Residential Energy Code Field Guide

<http://www.youtube.com/watch?v=mCM6e4rhPr4>

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Existing conditions before retrofit

Existing Conditions

Building Size: 1,114 Sq Ft

Annual Energy Use:

Fuel:
Propane - 85 Gallons, \$208
Oil - 761 Gallons, \$1,721
Electric: 3,931 kWh, \$669
Total: \$2,598

Heating, Btu/sq. ft./yr.:

This home: 96,936
Typical improved Vermont home: 30,000-40,000
ENERGY STAR new home: less than 20,000

Electrical, kWh/yr.

This home: 3,931
Average Vermont home: 7200

Owner Concerns

- 1 Want to save energy and money.
- 2 House feels drafty.
- 3 Interested in Home Performance with Energy Star program.
- 4 Homeowner suspects that the windows are leaky.
- 5 Interested in rebates for energy efficiency improvements.

Appraiser never sees this information

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Poll Question

In one word, define the conditions the owner identified?



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Existing conditions before retrofit are a comfort issue.

Comfort



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★ ★ ★
Identify landmines in the appraisal that may undermine the value of an energy efficient home and comfort.



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★
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★ ★ ★ Appraisal Concerns

- Inaccurate information on the property appraised or sales used as comparables
- Inappropriate sales data
- Omission of analysis, description, or explanation of energy or green features.



★ ★ ★
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Because appraiser never saw the energy report they see this.

Typical old house
built in 1800s.

High heating bills
Drafty



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Key Take Aways From The Case Study

- Appraiser needs the full energy report
- The energy report identifies upgrades and issues the house may have.
- Without the data, the appraiser may select comparables that are not really similar.



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Alaska House with Upgrades



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How Many Stars is Average House in Alaska?



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The Case Study Home Before Upgrades



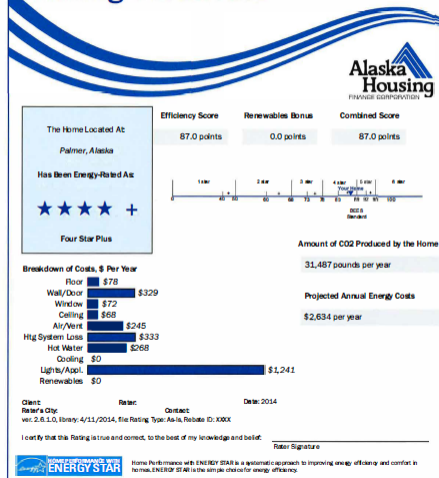
- 2-Story
- Built 2000
- Rated 4-Star in 2014
- 5 Occupants

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Home Energy Rating Certificate



Energy Report Before Retrofit

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Energy Report Before Retrofit

Annual Energy Use:	
Space Heating	\$1,125
Water Heating	\$268
Cooling	\$0
Appliances/Lights	\$1,241
Renewables	\$0
Total	\$2,634

What does the data tell us?

Breakdown of Costs, \$ Per Year

Floor	\$78
Wall/Door	\$329
Window	\$72
Ceiling	\$68
Air/Vent	\$245
Htg System Loss	\$333
Hot Water	\$268
Cooling	\$0
Lights/Appl.	\$1,241
Renewables	\$0

Envelope Rating Before Retrofit

4 ACH@50Pascals

Envelope Efficiency

Floor Insulation	R-26.8 *
Wall/Door Insulation	R-14.0 *
Ceiling Insulation	R-38.5
Window U-Value	U-0.40
Window SHGC	0.57
Window to Wall Ratio, Living Space	13.1%
South Facing Window Area	169 square feet
Air Leakage	4.0 Air Changes per Hour at 50 Pascals
	0.30 Air Changes per Hour Natural

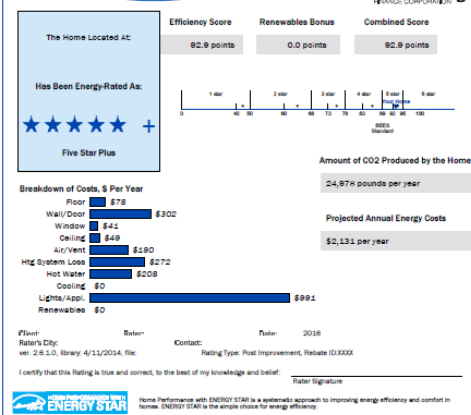
* Includes the insulating value of the ground in contact with these components.

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Home Energy Rating Certificate



2017 Energy Retrofit

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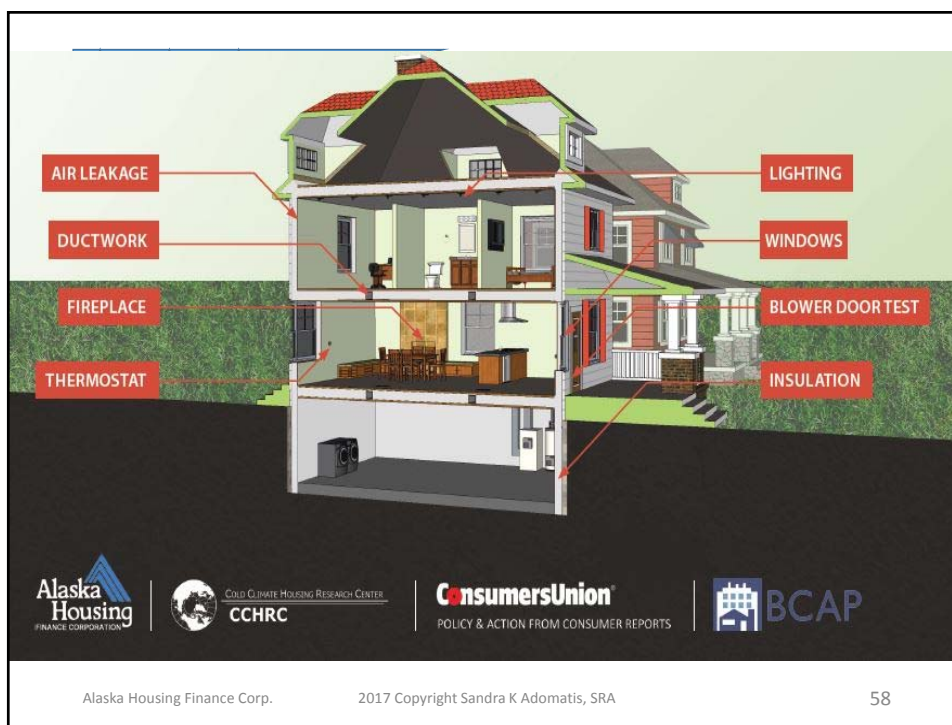
The Upgrades

- Added Insulation in Attic and below grade wall
- On demand domestic hot water
- Added two, 4x4 triple pane windows on south side
- Air sealed
- Upgraded two exterior doors

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Energy Retrofit Report

Envelope Efficiency

Floor Insulation	R-35.1 *
Wall/Door Insulation	R-17.8 *
Ceiling Insulation	R-56.2
Window U-Value	U-0.38
Window SHGC	0.56
Window to Wall Ratio, Living Space	9.6%
South Facing Window Area	201 square feet
Air Leakage	2.6 Air Changes per Hour at 50 Pascals
	0.20 Air Changes per Hour Natural

* Includes the insulating value of the ground in contact with these components.

After

Envelope Efficiency

Floor Insulation	R-26.8 *
Wall/Door Insulation	R-14.0 *
Ceiling Insulation	R-38.5
Window U-Value	U-0.40
Window SHGC	0.57
Window to Wall Ratio, Living Space	13.1%
South Facing Window Area	169 square feet
Air Leakage	4.0 Air Changes per Hour at 50 Pascals
	0.30 Air Changes per Hour Natural

* Includes the insulating value of the ground in contact with these components.

Before

How Does Fannie Mae Define an Energy Efficient Property

Energy Efficient Improvements

An energy-efficient property is one that uses resource-effective design, materials, building systems, and site orientation to conserve nonrenewable fuels.

Special energy-saving items must be recognized in the appraisal process and noted on the appraisal report form. For example, when completing the appraisal report (Form 1004), special energy-efficient items are to be addressed in the Improvements section in the Additional features field. The nature of these items and their contribution to value will vary throughout the country because of climactic conditions, differences in utility costs, and overall market reaction to the

What does this data tell us?

Ventilation
System Type
Required Ventilation
Measured Ventilation

Heat Recovery Ventilator
92 CFM
83 CFM

After

Ventilation
System Type
Required Ventilation
Measured Ventilation

None
77 CFM
0 CFM

Before

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Identify the benefits from the Retrofit

- **Health – Indoor Air Quality**
- **Comfort – No more drafty Rooms**
- **Lower Cost – Energy Efficiency**



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Indoor Air Quality is a health issue.



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Liability Issues

- **Could an appraiser or real estate agent be liable for not identifying air quality issues in a house?**



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What does FHA say about safety?

Material deficiencies on appraisals are those deficiencies that have a direct impact on value and marketability. Material deficiencies include, but are not limited to:

- failure to report readily observable defects that impact the health and safety of the occupants and/or structural soundness of the house;
- reliance upon outdated or dissimilar comparable sales when more recent and/or comparable sales were available as of the effective date of the appraisal; and
- fraudulent statements or conclusions when the Appraiser had reason to know or should have known that such statements or conclusions compromise the integrity, accuracy and/or thoroughness of the appraisal submitted to the client.

II. ORIGINATION THROUGH POST-CLOSING/ENDORSEMENT

A. Title II Insured Housing Programs Forward Mortgages

3. Underwriting the Property

Page 160

What does FHA say about safety?

iii. Determination of Defective Conditions

(A) Definition

Defective Conditions refer to defective construction, evidence of continuing settlement, excessive dampness, leakage, decay, termites, environmental hazards or other conditions affecting the health and safety of occupants, collateral security or structural soundness of the dwelling.

Handbook 4000.1

Effective Date: 09/14/2015 | Last Revised: 09/30/2015

*Refer to the [online version](#) of SF Handbook 4000.1 for specific sections' effective dates

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What does FHA say about safety?

(J) Environmental

The Mortgagee must confirm that the Property is free of all known environmental and safety hazards and adverse conditions that may affect the health and safety of the occupants, the Property's ability to serve as collateral, and the structural soundness of the improvements.

(K) Lead-Based Paint

The Mortgagee must confirm that the Property is free of lead paint hazards.

II. ORIGINATION THROUGH POST-CLOSING/ENDORSEMENT

A. Title II Insured Housing Programs Forward Mortgages

3. Underwriting the Property

Page 160

If a real estate agent is aware of indoor air quality that is unhealthy, are they obligated to disclose?





REALTOR® Code Of Ethics

Article 2

Realtors® shall avoid exaggeration, misrepresentation, or concealment of pertinent facts relating to the property or the transaction. Realtors® shall not, be obligated to discover latent defects in the property, to advise on matters outside the scope of their real estate license, or to disclose facts which are confidential under the scope of agency or non-agency relationships as defined by state law.
(Amended 1/00)



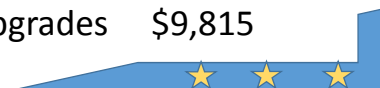
Energy Costs Before & After Retrofit

Projected Energy Costs in 2014 \$2,634

Projected Energy Costs Annually \$2,131

Annual Savings \$ 503

Cost to retrofit the energy upgrades \$9,815





Case Study – Your Turn to Answer

- **How would you approach an energy efficient adjustment if your comparables do not have the savings?**



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Case Study – Your Turn to Answer

- **What is the time it will take to recoup the investment?**

Cost to retrofit the energy upgrades	\$9,815
Annual Savings	\$ 503



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Case Study – Your Turn to Answer

- **How much will the property owner make on their investment? (% or return on investment)**

Cost to retrofit the energy upgrades	\$9,815
Annual Savings	\$ 503



Case Study – Your Turn to Answer

- **How would you support the useful life of the energy upgrades?**





Is \$503 a year all they gained?



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What must the savings be to
deserve a sales price premium?



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7,000 SF Under Heat/Air



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Annual Heat/Air Bill is \$700

Appraisal Improvement Section States:

Additional Features (special energy efficient items, etc.)

The garage is finished & heated, 4" foam under basement slab (R-18) & 3" EPS Foam on Exterior Basement Wall. Electric heat in bathroom floors, 80 electric water heater along with Navien Tankless Water Heater.



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Cost Premium Over Building to Code 3%

Sales Comparison Approach in Appraisal – No Energy Efficient Adjustment



Appraiser Response to No Energy Adjustment

In high-end, good quality housing, everything is lumped into quality rating and that includes energy features.

None of the comparables had energy reports or the same high efficient mechanicals the appraised property possessed.



Part 2.



Appraisal Methodology



HUD Handbook 4000.1

(d) Adjusting Comparable Properties

(i) Standard

Calculation of the Contributory Value includes methods based on the:

- direct sales comparison approach;
- cost approach; and
- Income approach.



HUD Handbook 4000.1

What does an appraiser need to support an adjustment using HUDs listed methods?

Cost Approach

Sales Comparison Approach

Income Approach



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Sales Comparison Section



- **The sales - do they have the same energy features?**
- **How can you be sure the sales have the same energy features?**



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Sales Comparison Section

- If your sales do not have the same energy upgrades, does that suggest energy efficiency has no value?



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Has anyone developed paired-data based on the energy rating - # of Stars?



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Paired-Data Analysis

	Sale 1		Sale 2	
Sale Date	3/26/2015		2/4/2015	
Sale Price		\$335,000		\$352,000
Site Size	11,240 SF		9,000 SF	
Room Count	7/3/2	+ 2,500	6/3/2.5	
Gross Living Area/SF	1,580	+2,500	1,710	
Age	4		3	
Energy Rating	Four	12,000	Six	
Adjusted Sales Price		\$352,000		\$352,000

Compares two similar properties to extract value of energy improvements
 Sale 2 Sales Price \$252,000 – Adjusted Sales Price of Sale 2 before making
 energy efficient adjustment \$240,000 = \$12,000 adjustment for EE.

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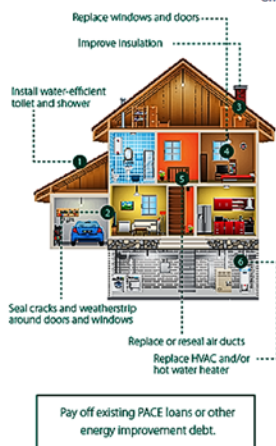
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What's New

Energy-Efficient Mortgage Program
 Improved
 Housing Industry Forum shares updates made to Fannie
 Mae's popular HomeStyle Energy program.

Show All Q



Fannie Mae

Verify that the recommended energy improvements are cost-effective.

Energy improvements are determined cost-effective when the cost of the improvements, including maintenance, is less than the present value of the energy saved over the useful life of the improvement.

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Is Cost New market driven?

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Depreciated Cost Method

Cost New of Energy Improvement Items
\$17,500

Depreciation from all forms of loss
3 yrs old*/23 yr life expectancy = 13%

13% x \$17,500 = - 2,275

“As Is” (Depreciated Value of Energy Imprv)
\$15,225

*23 year life expectancy based on Marshall and Swift Residential Handbook estimates for energy efficiency. * Energy efficient items were installed 3 years ago.

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Depreciated Cost Method

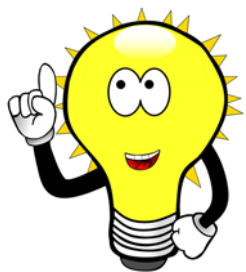
Energy Efficient Upgrade Costs are important and can be used as one indicator in estimating value. Even if the updates were 2-3 years ago, the costs are important to the appraiser.

Provide a list of those update and if the actual contract is available, provide it to the appraiser.

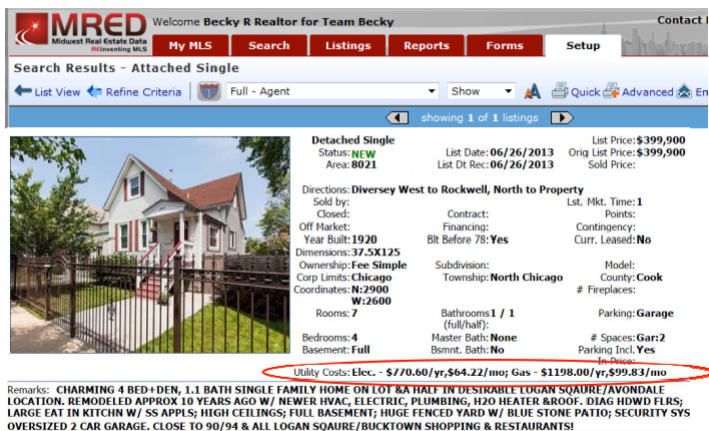


Alaska's Requirement to Disclose Utility Costs Prior to Transfer

Will this have or has it had any affect on the market?



Chicago Sets A Standard Energy Cost "Auto-Pop" in Chicago



MRED Welcome Becky R Realtor for Team Becky

Search Results - Attached Single

showing 1 of 1 listings

Detached Single
Status: **NEW**
Area: **8021**

List Date: 06/26/2013
List Dt Rec: 06/26/2013
List Price: **\$399,900**
Orig List Price: **\$399,900**
Sold Price:

Directions: **Diversey West to Rockwell, North to Property**

Sold by:
Contract:
Off Market:
Financing:
Year Built: **1920**
Dimensions: **37.5X125**
Ownership: **Fee Simple**
Subdivision:
Corp Limits: **Chicago**
Coordinates: **N:2900**
W: **2600**
Rooms: **7**
Bathrooms: **1 / 1**
(full/half):
Bedrooms: **4**
Master Bath: **None**
Basement: **Full**
Bsmt. Bath: **No**

List. Mkt. Time: **1**
Points:
Contingency:
Curr. Leased: **No**
Model:
County: **Cook**
Fireplaces:
Parking: **Garage**
Spaces: **Gar:2**
Parking Incl. **Yes**

Utility Costs: Elec. - **\$770.60/yr**, Gas - **\$64.22/mo**, Water - **\$1198.00/yr**

Remarks: **CHARMING 4 BED+DEN, 1.1 BATH SINGLE FAMILY HOME ON LOT 6X107 IN DESIRABLE LOGAN SQUARE/AVONDALE LOCATION. REMODELED APPROX 10 YEARS AGO W/ NEWER HVAC, ELECTRIC, PLUMBING, H2O HEATER & ROOF. DIAG HWMD FLRS; LARGE EAT IN KITCHN W/ SS APPLS; HIGH CEILINGS; FULL BASEMENT; HUGE FENCED YARD W/ BLUE STONE PATIO; SECURITY SYS OVERSIZED 2 CAR GARAGE. CLOSE TO 90/94 & ALL LOGAN SQUARE/BUCKTOWN SHOPPING & RESTAURANTS!**

Source: MRED.LLC

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Results of Energy Disclosure in Chicago

- Neighborhood – Lakeview
- DOM for Listings with energy disclosures – 43 days
- DOM for Listings without energy disclosures – 63 Days

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Why would energy disclosed on a listing sell faster?



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Isn't energy saved a cash flow?



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Income Approach

HP12 C

20 N – Number of years features will last (physical life) (23-yrs less actual age of 3 years)

5 (%) I - Discount Rate

\$850 PMT - Annual savings amount (based on Home Energy Score)

Press PV - Should give present value or

\$ 10,600 rd

(It will show as a minus-press CHS for change sign)

(Uses Annual Compound Interest rate of 5% based on mortgage rate

plus 1% for risk factor)



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Income Approach Data

- **Rentals – a high percentage of houses are rented in the state**
- **Energy savings can be developed using the Energy Efficiency Calculator**



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Income Approach

Fannie Mae's Preferred Income Approach

Monthly Rent

Appraiser finds rents of Energy Efficient Houses \$1,200
 Appraiser finds rents of similar non-EE Houses \$1,100

Difference in rents (income) \$ 100

Appraiser finds **Gross Rent Multipliers of EE Houses**
 Sale Price of EE House \$110,000 / Monthly Rent \$1,200 = 91.7

Indicated Value of Energy Efficient Items Using GRM

91.7 GRM x Rent attributed for EE \$100 = \$ 9,170

Test of Reasonableness

Overview of Methodology to Value Energy Efficient Features

Paired-Data Analysis	\$12,000
Depreciated Cost	\$15,225
Income Approach (GRM)	\$ 9,170
Income Approach (PV)	\$10,600

Reconciliation: All three methods form a tight value range for the energy efficient features. The depreciated cost method deserves the least consideration because the estimate of depreciation has most room for error. The Paired-Data and Income Approach closely point to \$12,000 and deserve the most consideration because the Paired-Data Analysis is directly from sales in this market. The Income Approach closely represents buyers thinking on savings from energy improvements.



Could a homeowner invest \$15,000 in energy upgrades to save around \$2,400 a year, expect to receive a \$35,000 sales price premium for the energy upgrades?



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Do you believe houses that have experienced significant energy upgrades sell for 15% more in Fairbanks?



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Do you believe houses with significant energy upgrades sell for 5% to 11% more in Anchorage Area?



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What will it take to convince appraisers and real estate agents that energy efficiency has value?



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Alaska Prime for An Appraiser Driven Study

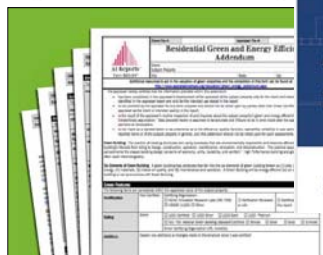
- Using appraiser methodology
 - Cost new
 - Paired-data
 - Present Value

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Resources



Unlocking the Value of an Energy Efficient Home

A Blueprint to Make Energy Efficiency
Improvements Visible in the Real Estate Market

August 2013

CNE Energy
National Home Performance Council

Green MLS Implementation Guide v1.0

Developed by the
National Association of REALTORS®
and YAR's Green Resource Council



Appraisal Value and Energy Efficiency: Getting it Right

With energy efficiency and green building becoming more important factors in home buying and selling decisions, appraisers need to understand the value of energy efficiency improvements. This guide provides a framework for appraisers to understand the value of energy efficiency improvements and how to incorporate them into their appraisal reports.

A ready-made valuation table is provided to help appraisers estimate the value of energy efficiency improvements. The table is based on data from the U.S. Department of Energy's National Home Performance Council (NHPC) and the National Association of REALTORS® (NAR).



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Alaska Specific Resources



<https://www.ahfc.us/efficiency/research-information-center/fact-sheets-and-information/>

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Session Take-A-Ways

Energy Efficiency
Message Must
Change

Data must be
accessible!

Real Estate
Professionals must
work together!

Reconsideration of
Value is available.

Energy Use Disclosure
at time of sale is law.

MLS must implement
green fields.

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Time for Evaluations



Speaker: Sandra K. Adomatis

Day 2: Session 2: An Alaska Case Study Using Big Data

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<https://twitter.com/sadomatis>



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Time for Questions





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Thank you for Attending!

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