AMENDED TITLE:
AN ACT RELATING TO AN ENERGY MORTGAGE VALUATION PROGRAM;
AND PROVIDING FOR AN EFFECTIVE DATE

PRIME SPONSOR: FISCHER,V.
CO-SPONSORS:
CURRENT STATUS: 2/07/94 IN (S) LABOR & COM REFERRAL: FINANCE

SB 414 SENATE ACTION

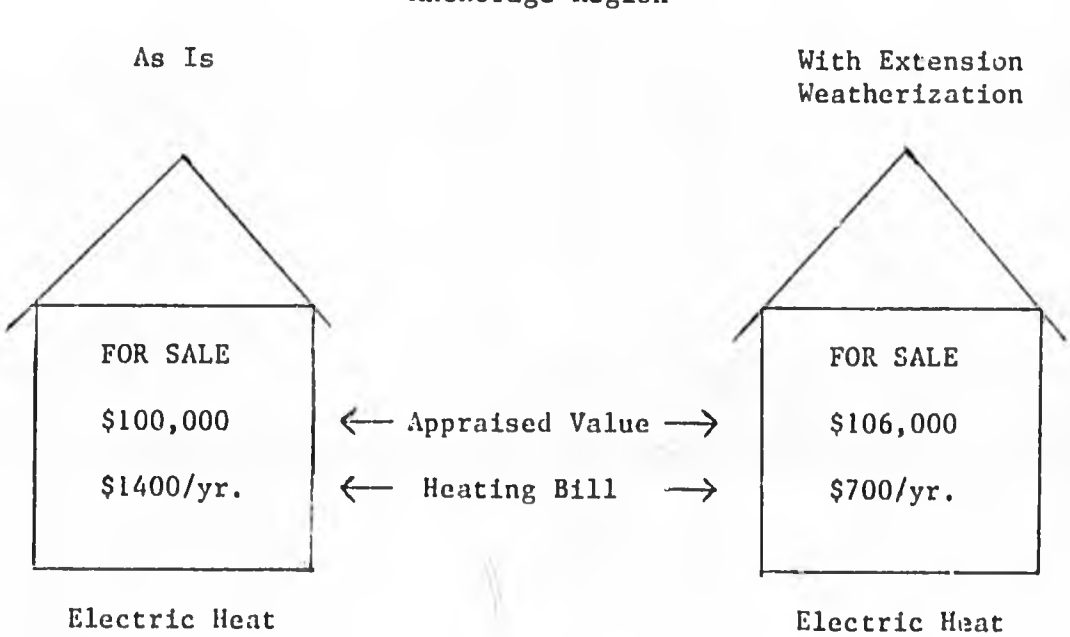
DATE	SEQ	PAGE	LEGISLATIVE ACTION
02/07/94	01	1968	FIRST READING --- COMMITTEE REPORTS LABOR & COMMERCE FINANCE RULES

**** ** ** *** *** ***

ENERGY MORTGAGE VALUATION PROGRAM

HOME A | HOME B

Anchorage Region



	Without EMVP		With EMVP
	Home A	Home B	Home B
Cost	$100,000	$106,000	$106,000
Monthly Payment (Principal (P) + Interest (I)	$833.69	$883.71	$883.71
Energy (E)	$117	$58	$58
P + I + E	$950.69	$941.71	$941.71
Debt-to-Income Ratio	28% (P+I)	28% (P+I)	32% (P+I+E)
Minimum Monthly Income Required to Qualify Purchaser	$2978	$3157	$2943

Adjusting the debt-to-income ratio to include energy costs allows a buyer to qualify for the more expensive energy-efficient home with less income than that required for the cheaper home because total monthly costs for the home are less.

Areas of higher energy cost or colder regions have more to gain than Anchorage by implementation of EMVP.

Sheila -
We do not want to schedule SB 414 at this time, but here's something for

Senator Vic Fischer
Alaska State Legislature
Pouch V • Juneau, Alaska 99811 • (907) 465-4954

MEMORANDUM

February 17, 1984

TO: Senator Dick Eliason

FROM: Vic Fischer

RE: energy mortgage valuation program

I would like to request that you schedule SB 414 for a Labor and Commerce hearing at your earliest convenience.

What the bill essentially does is create an energy efficiency rating system for homes so that everyone-- bankers, appraisers, contractors, homebuyers, etc. will talk the same language when they talk about energy efficiency. Then, the bill requires the state programs that subsidize home purchases (AHFC and Non-conforming) to consider a home's energy rating in establishing a person's income eligibility. In other words, if the energy costs are low, then a buyer would qualify for a more expensive energy-efficient home (because the higher mortgage payments and lower energy costs would be no more than the lower mortgage but higher energy costs of a less efficient home.) The net results would be to qualify more people as homebuyers, and to improve the housing stock overall.

This system is presently being used in other states such as Washington and Oregon. In initial discussions with Alaskans in the housing industry, it appears to be preferred to codes or standards. It was discussed in a seminar at the recent Alternative Energy Conference and attracted a great deal of interest.

I am attaching some relevent back-up information. My aide, Nancy Lord, has more information and can answer any questions you may have.

SHELTER INDUSTRY

RESIDENTIAL ENERGY EVALUATION PROGRAM

GOAL: To develop a "market solution" to energy considerations in the residential sector

GENERAL APPROACH: Develop a national model for:

[A] The integration of a uniform residential energy evaluation (rating) methodology into the daily business practices and procedures of the major shelter and utility industry sub-sectors

through the

[B] Voluntary and cooperative efforts of representatives of the major sectors of the shelter and utility industries

NEED: In recent years the shelter and utility industries have developed a variety of programs to deal with the impacts of rising energy costs in the residential market. Unfortunately, the approach of each industry sector separately dealing with this problem has led to a great deal of confusion in the marketplace. Indeed, at present there exists no common language among relevant industry participants for evaluating the relative market value of energy efficiency improvements in residential housing.

This situation has led to:

° Buyer confusion as to the true energy efficiency potential of the home in question

° Appraiser inability to measure the market value of energy efficiency improvements due to the variety of energy terms, concepts and equipment confronting them in the marketplace. [Essentially, appraisers are presently in the position of comparing apples to oranges in attempts to evaluate the market impacts of energy.]

° Builder concern over the added cost of efficiency improvements without any market recognition of the added value that may also occur due to those improvements

IPPM
Institute for Public Policy and Management
University of Washington
3935 University Way N E
Seattle Washington 98105
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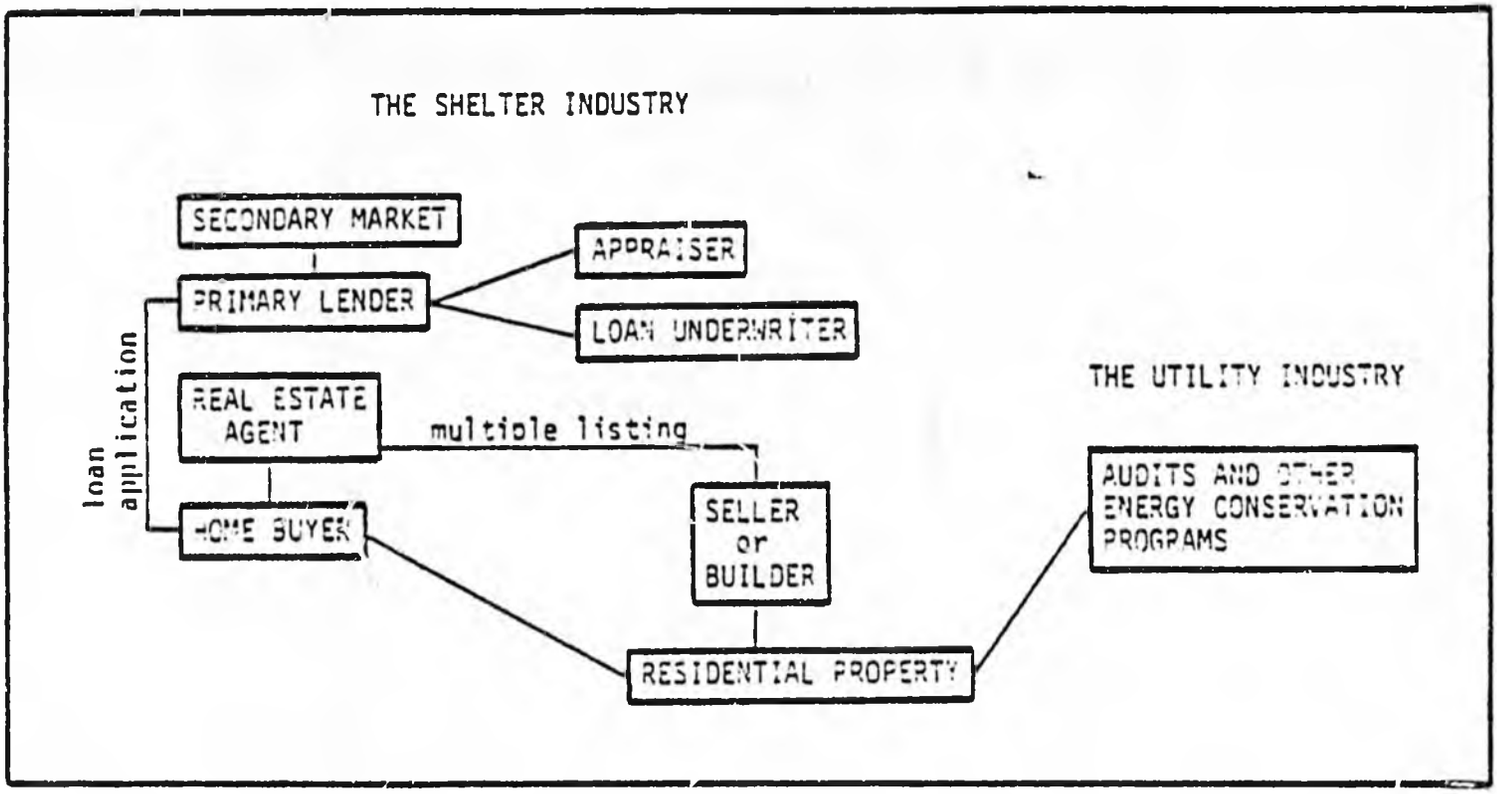
ENERGY RATING PROGRAM: THE SHELTER AND UTILITY INDUSTRIES



- Realtor difficulty in reliably identifying the energy efficiency potential of a property in order to inform buyers of the potential long term impacts of the home's energy characteristics

- Lender difficulty in reliably evaluating the potential dollar impacts of rising utility bills on the residential buyer's ability to meet mortgage obligations - thus making it difficult to take into account energy-efficiency impacts in the underwriting process.

- Utility concerns that energy efficiency improvements made by customers are not adequately being reflected in the marketplace

- Secondary market concerns that lenders be able to reliably justify higher than normal consumer loan to debt ratios (per secondary market guidelines) for highly energy efficient homes

What is needed, then, is the development of:

[A] A common language with which each market sector can understand the same thing about the same house as related to energy.

The development of such a language (i.e. an energy rating) would allow each individual sector to use the information to assist the market in responding to residential energy efficiency

[B] A process by which each market sector - with its own special interest and perspective - can adequately express its concerns as related to the implementation of an energy rating methodology into the residential marketplace

The Washington Residential Energy Evaluation Program has been designed as a national model for meeting the above needs.

DESCRIPTION: The program, to date, has been designed to integrate an energy efficiency-potential rating into the residential market, initially through the residential appraisal process, potentially through the utility audit process, and also (perhaps) through the development of a private sector certified energy rating (auditing) industry - as presently exists in some states.

Of necessity, the information would have to be:

[A] Available on a data bank that could be used by appraisers to determine the comparable market value of the residential property

[B] Capable of being updated as consumers undertake energy efficiency improvements

[C] Technically accurate to insure that the rating (akin to an EPA rating) reflected a close approximation of the home's energy efficiency-potential

[D] Available for use by each industry subsector at the time it is most useful to have the information, e.g., realtors need the information prior to the sale for it to be of any use

POTENTIAL MARKET BENEFITS:

GENERAL:

Allows the market to operate more effectively by informing all sectors of the market about the energy efficiency-potential of a residential structure

BUYER:

Allows the buyer to make a better informed market decision as related to the energy efficiency of the purchased property

SELLER/BUILDER:

Allows the seller/builder to use the energy efficiency rating as a tool in marketing the property

BROKER/AGENT:

Allows the agent to use the energy efficiency-potential of the home as a measure of quality in selling the subject property

APPRAISER (STAFF & FEE):

Allows the appraiser (over time) to better evaluate the market response to energy efficiency in residential property evaluations

UNDERWRITER:

Allows the underwriter to better estimate the impact of energy efficiency (or inefficiency) on the purchaser's ability to meet mortgage obligations on the property

SECONDARY LENDER:

Allows secondary markets to better evaluate primary lender loans that are made (for energy efficiency reasons) above normal loan to debt guidelines

UTILITY INDUSTRY:

Allows the market to better reflect the efforts of utility customers who have taken the time, effort and money in the past to upgrade their home's energy efficiency-potential

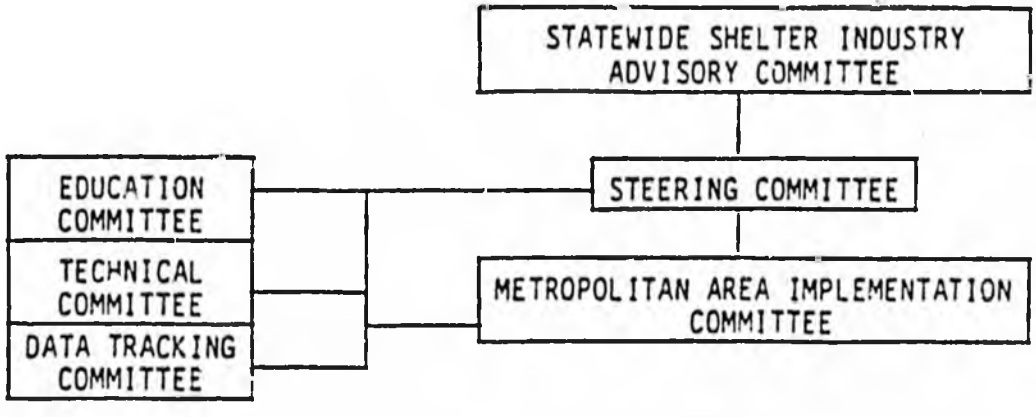
PROGRAM
DESIGN: The program is designed to:

[A] operate in three phases over a two year period. Below are listed the major features of each phase:

Phase I.	Consensus Building Phase (4-6 months)	Organization of Broad Based Representation: Appraisers Home Builders Lenders Realtors Government Consumers Utilities
Phase II.	Organizational and Developmental Phase (6 months)	Operating Committees Energy Rating Development Training Program Standard Operating Procedures
Phase III	Implementation Phase (12 months)	Community Education Program Field Test Regional Implementation

[B] be implemented at the local metropolitan level (SCMA) with both local area and statewide shelter industry committees providing leadership and oversight. Technical, educational, and residential data "tracking" committees provide needed input to insure borad based community support for the implementation effort.

FIELD APPLICATION COORDINATING STRUCTURE



PRESENT STATUS:

- The Bonneville Power Administration has proposed funding an energy rating activity such as this in all four Northwest states

- The Northwest Regional Power Council Staff have recommended that council support be given to the housing industry for implementation of a voluntary rating program

- Washington State:

  The program in Washington State has gone through Phase I of the general program outline above - industry groups have been involved in the development of the concept and have been most supportive of the approach. Further, a successful, limited field-test of the concept was undertaken during July, August and September 1982. Rainier Mortgage Co., Washington Mutual Savings Bank and First Mutual Bank participated. Over 60 appraisers were trained during this period, resulting in over 300 "energy addenda" (i.e. ratings) being co[illegible]ted as part of the appraisal process.

- Oregon:

  The first phase of the Oregon program - targeted for the Portland metropolitan area - began November 22, 1982 with support from the State Savings and Loan League, appraisers, builders, utilities, etc.

- Idaho and Montana:

  These states are actively considering the implementation of similar programs.

- Colorado:

  Colorado appraisers, realtors, builders, etc. have expressed an interest in initiating the program in Denver. If funding can be secured, the program will begin in the first part of 1983.

- Other States, e.g., Alaska, Florida and California, have expressed a keen interest in the concept.

FLOOR AREA

2 HEATED FLOOR AREA ____ SQ.FT.

SPACE AND WATER HEATING ENERGY EFFICIENCY

3 WATER HEATING

POOR	FAIR	GOOD	EFFICIENT	VERY EFFICIENT
0	2	6.5	8	14.5

SCORE ____ (a)

4 ENVELOPE EFFICIENCY Ψ

a	CEILING	0	17.5	19	20	20.5
b	WALLS	0	16.5	22	26	27
c	FLOOR	0	2.5	3.5	4.5	5
d	WINDOWS	0	5	9.5	11	13
e	AIR CHANGES	0	6	9	12.5	14

ENVELOPE EFFICIENCY TOTAL ____ (b)

5 SOLAR GAIN Ψ

	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95
Light 50 sq.ft.	3.5				2.5				2				2				1.5		
Light 100 sq.ft.	7				5				3.5				3				2.5		
Light 200 sq.ft.	13				8				5.5				4				3		
Heavy 50 sq.ft.	4				3				2.5				2				2		
Heavy 100 sq.ft.	7.5				5.5				4.5				4				3		
Heavy 200 sq.ft.	14.5				10				7.5				6				5		
Heavy 300 sq.ft.	19				12.5				10				7.5				5.5		

SOLAR GAIN ____ (c)

COOLING ENERGY EFFICIENCY

6

COOLING ENERGY

COOLING ENERGY N/A

PREVENTION OF OVERHEATING
- ( ) Overheating Not a Problem
- ( ) Possible Overheating Problem
- ( ) Overheating Prevention Measures Taken
  - ( ) Window Shading and Other Solar Control
  - ( ) Ventilation by Openable Windows
  - ( ) Mechanical Ventilation or Cooling Device

EFFICIENCIES OF WATER AND SPACE HEATERS

7

WATER HEATER EFFICIENCY

NATURAL GAS	OIL	ELECTRICITY
( ) Older than three years		( ) Older than 3 years
( ) New, more efficient		( ) New water heater

SPACE HEATER EFFICIENCY

NATURAL GAS	OIL	ELECTRICITY
( ) New gas burner	( ) New furnace	( ) Baseboard
( ) New high efficient or with electric ignition	( ) Old, maintained	( ) Forced air
( ) Electric ignition plus vent damper	( ) Old, unmaintained	( ) Insulated ducts
( ) Older than 3 years	( ) Insulated ducts	( ) Heat pump-air to air
( ) Insulated ducts	( ) Chamberless retrofit	( ) Heat pump-ground source or solar assisted
	( ) Flame retention burner	
	( ) Vent damper	
	( ) Delay timer	

ENERGY EFFICIENT DEVICES
- ( ) Automatic setback thermostat
- ( ) Other energy saving appliances or devices

EFFICIENCY POTENTIAL RATING

8 TOTAL SCORE ____ (a)

RATING	SCORE
Poor	0 - 22
Fair	23 - 49
Good	50 - 65
Efficient	66 - 76
Very Efficient	77 - abo

EFFICIENCY POTENT RATING

low
mid
high

ANNUAL ENERGY USE

9

9a. WATER HEATING
(____)MBtu/yr

9b. SPACE HEATING
(____)MBtu/yr

9c. TOTAL
(____)MBtu/yr
Approximate Annual Energy Use Total

ANNUAL ENERGY COST

10

10a. WATER HEATING
(____)MBtu/yr / (____)Efficiency x (____)$/MBtu = (____)$/y

10b. SPACE HEATING
(____)MBtu/yr / (____)Efficiency x (____)$/MBtu = (____)$/y

10c. TOTAL (____)$/y
Approximate Annual Energy Cost Total

WRI 102

* The Efficiency-Potential Rating is based on a heat loss methodology that assumes "typical" or average energy use. Because of this, individual home energy use (and cost) figures estimated above may vary from actual useage. The rating above represents the energy efficiency potential for the home assuming typical energy use patterns.

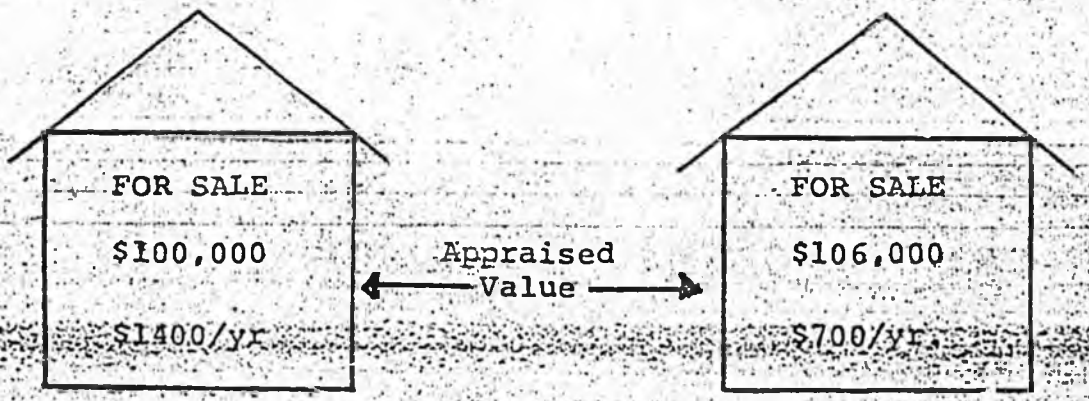
HOME A

HOME B

Anchorage Region

As Is

With Extensive Weatherization



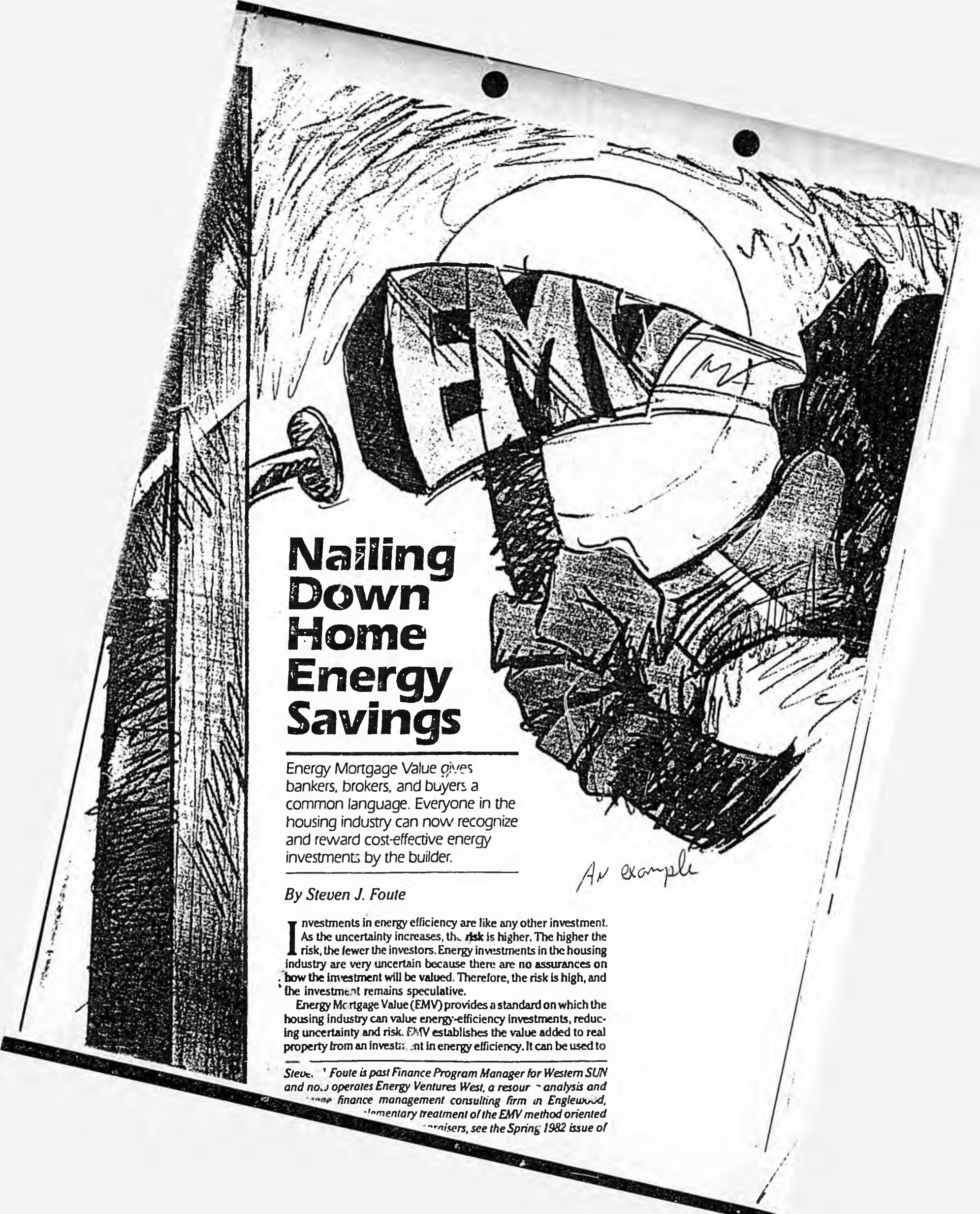
Electric Heat
2x4 Construction

Electric Heat
With Extensive
Weatherization

The weatherization is appraised as value added to the home. Mortgage can cover base home plus weatherization.

	Base Home	Energy Efficient Home
Cost	$100,000	$106,000
Monthly Payment (Principal (P) + Interest (I))	$833.69	$883.71
Energy (E)	$117	$ 58
P + I + E	$950.69	$941.71
Minimum Monthly Income Payment	$2977	$2977
Debt to Income Ratio	29% (P+I)	32% (P+I+E)
	($833.69 is 28% of $2977)	($941.71 is 32% of $2977)

Areas of higher energy cost or colder regions have more to gain than Anchorage by allowing higher rations that include energy cost.



Nailing Down Home Energy Savings

Energy Mortgage Value gives bankers, brokers, and buyers a common language. Everyone in the housing industry can now recognize and reward cost-effective energy investments by the builder.

By Steven J. Foute

Investments in energy efficiency are like any other investment. As the uncertainty increases, the risk is higher. The higher the risk, the fewer the investors. Energy investments in the housing industry are very uncertain because there are no assurances on how the investment will be valued. Therefore, the risk is high, and the investment remains speculative.

Energy Mortgage Value (EMV) provides a standard on which the housing industry can value energy-efficiency investments, reducing uncertainty and risk. EMV establishes the value added to real property from an investment in energy efficiency. It can be used to

Steven J. Foute is past Finance Program Manager for Western SUN and now operates Energy Ventures West, a resource analysis and ... finance management consulting firm in Englewood, ... elementary treatment of the EMV method oriented ... praisers, see the Spring 1982 issue of

evaluate investment decisions for new construction, retrofit application, and resale property.

For the builder, the EMV is a design tool for finding the ceiling investment levels for any degree of energy efficiency. This maintains the profit margin while still qualifying more buyers.

For the builder and broker, EMV offers convincing buyer-oriented economics, showing a return on investment and a positive cash flow—usually from the very first year.

For the appraiser, EMV is an objective and standardized method to establish the value added to property based on energy-saving investments. The builder can recover investment costs, and the buyer does not suffer a down-payment penalty.

For the lender, it reduces the risk of loan default and foreclosure by providing a coherent buyer-qualifying process, which includes and rewards investments in energy efficiency.

For the buyer, EMV allows the lender to adjust the debt-to-income qualifying ratio so that there is no income penalty for selecting an energy-efficient home. Additional equity equal to the EMV is realized immediately upon purchase.

Establishing the economic value

EMV is based on the interest rate on the investment, the term of the loan, and the monthly estimated energy savings predicted from the investment. It is a reverse amortization process; a reversal of the way loan payments are calculated.

Figure 1: EMV—a reverse amortization process

Loan Amount →	Interest Rate →	Loan Term →	Monthly Payment
$3000	15 percent	30 years	$38
EMV ←	Interest Rate ←	Term ←	Monthly Energy Savings

From left to right in Figure 1, the top line is a typical loan payment schedule. The bottom, from right to left, is the EMV

Table 1: Energy Mortgage Value Schedule

Mortgage Interest Rate (%)	EMV (30-Year Term) per dollar
12.00	97.18
12.25	95.42
12.50	93.72
12.75	91.99
13.00	90.42
13.25	88.81
13.50	87.34
13.75	85.84
14.00	84.39
14.25	82.99
14.50	81.63
14.75	80.34
15.00	79.11
15.25	77.88
15.50	76.63
15.75	75.47
16.00	74.35
16.25	73.26
16.50	72.20
16.75	71.16
17.00	70.13
17.25	69.16
17.50	68.21
17.75	67.25
18.00	66.36

Values in the second column are derived from standard amortization tables. For example, at a 15% interest rate over 30 years, a $1000.00 note would cost $12.64 per month. This relationship is equivalent to a $79.11 loan at $1.00 per month ($1000 ÷ $12.64 = 79.11). Therefore, each dollar saved on energy per month results in an Energy Mortgage Value of $79.11 (79.11 × $1.00 = $79.11)

process. If you borrow $3,000 over a 30-year period at a rate of 15 percent, your payments would be $38 per month. Conversely, if an energy-efficient home, amortized over 30 years at 15 percent, saves $38 per month on energy, the savings would equal $3,000 in additional mortgage value. This amount could be added to the appraised value of the home.

The EMV process is derived from standard loan amortization tables and will never change for a given loan term. It describes what one dollar of energy savings is worth on a monthly basis over a range of interest rates. Table 1 is the EMV schedule. Each of the values on the schedule varies according to the interest rate, but all are based on a one-dollar-per-month savings. For example, at a 15 percent interest rate over 30 years, each dollar saved on energy per month is equivalent to $79.11 worth of additional real property value, A $10 per month savings at 15 percent would result in an EMV of $791.10, and so on.

In reverse, to find the monthly energy savings necessary for a given investment, divide the investment by the EMV. For example, for a $1,000 investment at 15 percent over 30 years, the monthly energy savings would need to be $12.64 ($1000÷79.11=$12.64).

Profit-making for builders—an example

Doug Balcomb optimized the cost/performance of a passive solar home for Mason City, Iowa, using a recently developed method (*Solar Age*, 9/81). The result indicated an annual savings of 89.3 MMBtu for an investment of $5,973. How would this design be valued as an investment by EMV?

If the HVAC backup were electric baseboard heating, the Btu savings convert to 26,164 kWh (1 kWh = 3,413 Btu). At 4.2¢ per kWh, the annual savings is $1,099, or $91.58 per month. Suppose the house is financed at 15 percent over 30 years. The EMV would be approximately $7,245 (from Table 1, 79.11 × $91.58). The EMV exceeds the actual costs by $1,272 ($7,245 - $5,973), netting a 121-percent return on investment. This is the net profit if the builder realizes full value on the scale.

The design tool in action

The EMV can be used as a design tool to show ceiling investment levels for any degree of energy efficiency desired. The investment design tool is based on seven factors: backup fuel type, conversion efficiency and cost, heated floor area, heating degree days, and mortgage interest rate and term. The following example contrasts two auxiliary fuel types.

Assume that the floor area of the building is 1,350 square feet, that it is located in a 6,016 degree day climate (501 °F-day/month), and that the interest rate is 15 percent over a 30-year period. The energy content of electricity is 3,413 Btu per kWh, a 100-percent system efficiency, and a cost of 5¢ per kWh. The energy content of natural gas is 100,000 Btu per therm, a 70-percent system efficiency, and a cost of 70¢ per therm.

First, derive the number of Btu's purchased from a one dollar investment, by dividing the energy content of the fuel by the unit cost.

Case 1 (electricity)

$$\frac{3{,}413/\text{kWh}}{\$.05/\text{kWh}} = 68{,}260 \text{ Btu/\$}$$

Case 2 (natural gas)

$$\frac{100{,}000 \text{ Btu/therm}}{\$.70/\text{therm}} = 142{,}857 \text{ Btu/\$}$$

Second, determine how energy-efficient the house must be per square foot in order to save one dollar per month on the heating bill. Divide the Btu/$ by the average heating degree days per month and the square footage of the design. The resulting value is then multiplied by the HVAC conversion efficiency factor. The result is the heat loss coefficient *reduction* necessary to realize a dollar per month energy savings.

$$\text{Case 1}\quad \frac{(68{,}260\ \text{Btu/\$})}{(501°\text{F-day})\,(1{,}350\ \text{ft}^2)} \times (1.0\ \text{efficiency}) = 0.101\ \frac{\text{Btu}}{(°\text{F-day ft}^2)}$$

$$\text{Case 2}\quad \frac{(142{,}857\ \text{Btu/\$})}{(501°\text{F-day})\,(1{,}350\ \text{ft}^2)} \times (.70\ \text{efficiency}) = 0.148\ \frac{\text{Btu}}{(°\text{F-day ft}^2)}$$

These design base numbers indicate the energy efficiency that must be built in on a square-foot basis.

Table II is the Energy Investment Design Tool. The two design base numbers we just derived are on the first line in column C. If achieved, they would each net the homebuyer one dollar per month in energy savings (column B). Column A describes the ceiling investment level to achieve these savings. To derive the other figures on the table, or any in between, a ratio can be set up between the investment levels and the other columns. For example, a $1,500 energy investment would yield a monthly energy savings of $18.96, if a heat loss reduction of 1.92 for electricity, and

Table 2. Energy Investment Design Tool

A	B	C	
Investment Level ($) (Equals EMV if "C" is achieved)	Monthly Energy Savings ($) (Realized if "C" is achieved)	Reduction in Heat Loss Coefficient Necessary to Achieve "B" for "A" Investment Level	
		Case 1 Electric	Case 2 Natural Gas
79.11	1	0.101	0.148
1000.00	12.64	1.277	1.870
2000.00	25.28	2.553	3.741
3000.00	37.92	3.830	5.612
4000.00	50.56	5.107	7.483
5000.00	63.20	6.383	9.354
6000.00	75.84	7.660	11.224
7000.00	88.48	8.936	13.095
8000.00	101.12	10.210	14.966

2.81 for natural gas (by multiplying the second line numbers in each column by 1.5) were achieved.

The investment table has three distinct applications depending on who is using it. The builder will likely be most interested in the levels of investment and would use column A as a starting point. The buyer of an energy-efficient home would be more concerned with the energy savings shown in column B. The engineer or designer would be interested in column C.

EMV and the mortgage finance community

There are good reasons to communicate EMV to the mortgage finance community. First, appraisers can use EMV to put an objective value on energy-efficient homes. Second, the secondary market is encouraging prime lenders to include energy in underwriting. Third, the lender is concerned about how energy carrying costs affect the ability of borrowers to repay a mortgage.

The conventional Cost and Market approaches of appraisal alone are unfair in placing a value on energy-efficient buildings. The former usually penalizes the builder and buyer with a less than 100 percent valuation, and the latter has few local "comparables" to provide an accurate comparison. The EMV assists by calculating a value for the added energy efficiency, which can be *added to* the value found for the house via one of the two conventional appraisal methods.

PITI + EI
Many lenders buyers, using Insurance plu

Tabl

Cost

Monthly Paym (20% Down) (15% Interest f over 30 Years Taxes & Insur

PITI

Energy

PITI+E (a)

Minimum Mo Income

Debt-To-Incc Ratio

(a) Note the cc home
(b) This is the PITI is use
(c) When ener

PITI + EMV

Many lenders are already including energy costs in qualifying buyers, using the conventional Principal, Interest, Taxes, and Insurance plus Energy (PITI+E). EMV allows the lender to calculate an increased qualifying ratio for the purchaser of the energy-efficient home. This adjustment is made by including energy costs in computing the debt-to-income ratio. Because EMV is based on energy savings, the *actual cash flow* of owning an energy-efficient home is approximately equal to owning a conventional home, once energy costs are included.

Referring to Table III, the buyer of the conventional $60,000 base home would require a minimum of $2,578 monthly income under a conventional 28-percent PITI ratio to meet a $722 monthly payment. However, the higher monthly payment of the energy-efficient home, $750, is almost directly offset by its energy savings, so the lender could adjust the qualifying ratio to about 30.5 percent. This allows the same minimum income of $2,578 to purchase the more expensive energy-efficient home. Actual adjustments are determined by specific energy costs and savings.

Table 3: EMV Debt-To-Income Ratio Adjustment

	Base Home	Energy-Efficient Home
Cost	$60,000	$63,000 Base + $3,000 EMV
Monthly Payment (20% Down) (15% Interest Rate over 30 Years)	$607	$635
Taxes & Insurance	$115	$115
PITI	$722	$750
Energy	+ $75	+ $37 ($75 - $38 Savings)
PITI+E (a)	$797	$787
Minimum Monthly Income	$2,578	$2,578
Debt-To-Income Ratio	28% PITI) ($722 is 28% of $2,578) (b)	30.5% (PITI+E) ($787 is 30.5% of $2,578) (c)

(a) Note the combined PITI+E cash flow is actually less for the more expensive energy-efficient home.
(b) This is the normal ratio used by mortgage underwriters in qualifying buyers, therefore the $722 PITI is used.
(c) When energy is included we must use the PITI+E figure of $787.

EMV

Using Energy Mortgage Value as an energy investment design tool will help the builder make sound business decisions. The builder can add energy value to a home in the design stages. The appraiser has a method to value the energy investment. The lender can maintain qualified buyers for more valuable homes with carrying costs less sensitive to escalating fuel costs, and develop a mortgage portfolio less subject to default. The buyer purchases a more valuable home, with instant equity and higher resale value, for the same monthly payments and a positive cash flow which increases with fuel inflation.

Steven J. Foute will deliver the EMV method to the 1982 AS of ISES Solar Technology Conference and International Exposition in Houston this month. The text will be published in the conference proceedings, which will be available from AS of ISES (c/o R.I.A.T., U.S. Highway 190 West, Killeen, TX 76541).

Senator Vic Fischer
Alaska State Legislature
Pouch V • Juneau, Alaska 99811 • (907) 465-4954

M E M O R A N D U M

February 17, 1984

TO: Senator Dick Eliason

FROM: Senator Vic Fischer

RE: SB 414, energy mortgage valuation program

I would like to request that you schedule SB 414 for a Labor and Commerce hearing at your earliest convenience.

What the bill essentially does is create an energy efficiency rating system for homes so that everyone-- bankers, appraisers, contractors, homebuyers, etc. will talk the same language when they talk about energy efficiency. Then, the bill requires the state programs that subsidize home purchases (AHFC and Non-conforming) to consider a home's energy rating in establishing a person's income eligibility. In other words, if the energy costs are low, then a buyer would qualify for a more expensive energy-efficient home (because the higher mortgage payments and lower energy costs would be no more than the lower mortgage but higher energy costs of a less efficient home.) The net results would be to qualify more people as homebuyers, and to improve the housing stock overall.

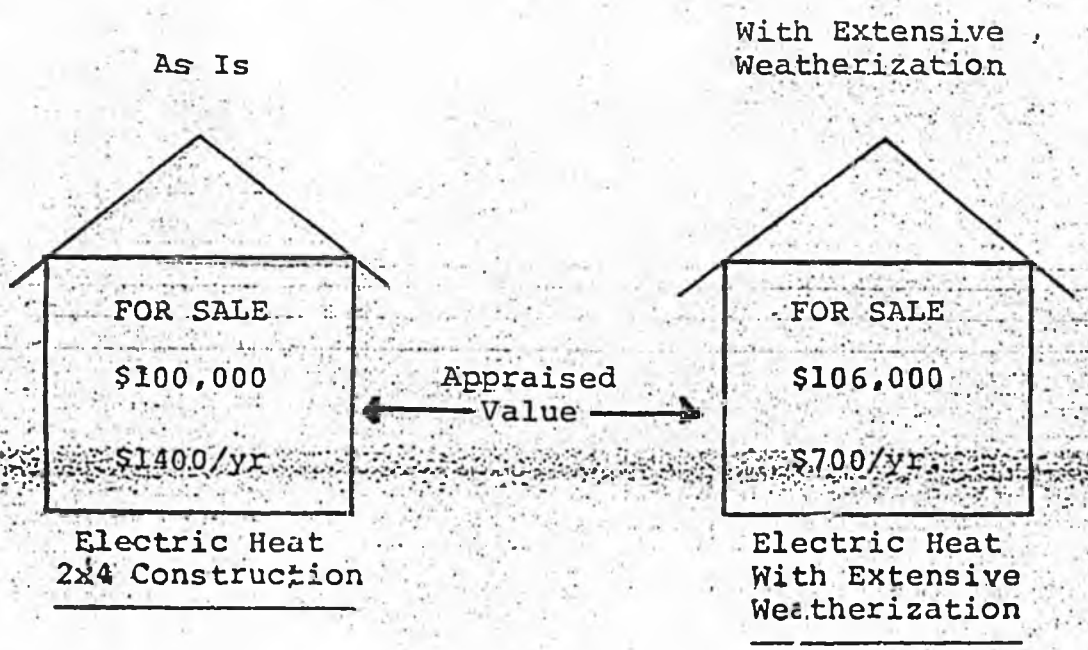
This system is presently being used in other states such as Washington and Oregon. In initial discussions with Alaskans in the housing industry, it appears to be preferred to codes or standards. It was discussed in a seminar at the recent Alternative Energy Conference and attracted a great deal of interest.

I am attaching some relevent back-up information. My aide, Nancy Lord, has more information and can answer any questions you may have.

HOME A

HOME B

Anchorage Region



The weatherization is appraised as value added to the home. Mortgage can cover base home plus weatherization.

	Base Home	Energy Efficient Home
Cost	$100,000	$106,000
Monthly Payment (Principal (P) + Interest (I))	$833.69	$883.71
Energy (E)	$117	$ 58
P + I + E	$950.69	$941.71
Minimum Monthly ~~Payment~~ INCOME	$2978	~~$2977~~ 2943
Debt to Income Ratio	28% (P+I)	32% (P+I+E)
	($833.69 is 28% of $2978)	($941.71 is 32% of ~~$2977~~ 2943)

Areas of higher energy cost or colder regions have more to gain than Anchorage by allowing higher rations that include energy cost.