

Lessons Learned from Four Years of Operating a Home Energy Rating System and Energy Efficient Mortgage Program

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Definition of an Energy Efficient Mortgage (EEM)

Any mortgage originated by a lender can become an EEM by incorporating either one or both of the following provisions:

1. The cost of energy improvements are financed along with the mortgage, and/or
2. The borrowers' debt-to-income ratios are increased (typically by 2%) to make it easier for borrowers to qualify for the mortgage on an "efficient" home.

EEMs have been available from the major U.S. secondary market lenders (Fannie Mae, Freddie Mac, HUD and VA) and local Housing Finance Agencies since the early 1980's. They have rarely been used because few home buyers, lenders or real estate agents know about them, the mortgage process works fine without them, there are insufficient incentives to encourage EEM use, the processes for participation are not easily understood, and there has been no uniform, accepted method in place to gauge whether or not a home is "efficient".

Program Goals of Energy Rated Homes of Vermont

1. To integrate energy efficiency into the mortgage lending process by institutionalizing energy ratings and the EEM.
2. To improve the energy efficiency of Vermont's housing stock.
3. To increase consumers' awareness of residential energy efficiency through the use of a simplified ONE to FIVE STAR rating system.

Program History

1986: Vermont Legislature allocated \$500,000 of oil overcharge funds to research, develop and implement an EEM program in Vermont.

Table 1. Impact of 2% Increased Debt-to-Income Ratios for an Energy Efficient Home

<u>Annual Income</u>	<u>Additional Mortgage Allowed*</u>
\$20,000	\$3,798
\$30,000	\$5,698
\$40,000	\$7,597
\$50,000	\$9,496
\$60,000	\$11,395

*10% rate, 30-year term

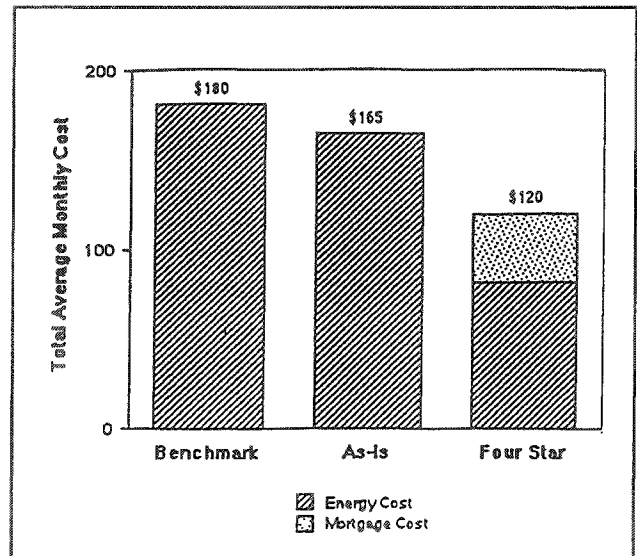


Figure 1. Example of Energy Cost Savings When Using the EEM to Finance Conversion from Electric Heat to Natural Gas

1987: EEM program research and design, and development of Energy Rated Homes (ERH) energy rating system.

- 1988: Pilot program launched in four counties with four lenders.
- 1989: EEM program expansion statewide after successful pilot (700 ratings).
- 1990: Fees for ratings and ERH as a membership organization initiated.
- 1991: Rating orders increased as Vermont home sales declined; most ratings used in EEMs to qualify marginal buyers for already-efficient homes or by builders to market their new homes' energy efficiency.
- 1992: 1,300 energy ratings issued and over 650 EEMs underwritten, 90% on already-efficient or close-to-efficient new homes.

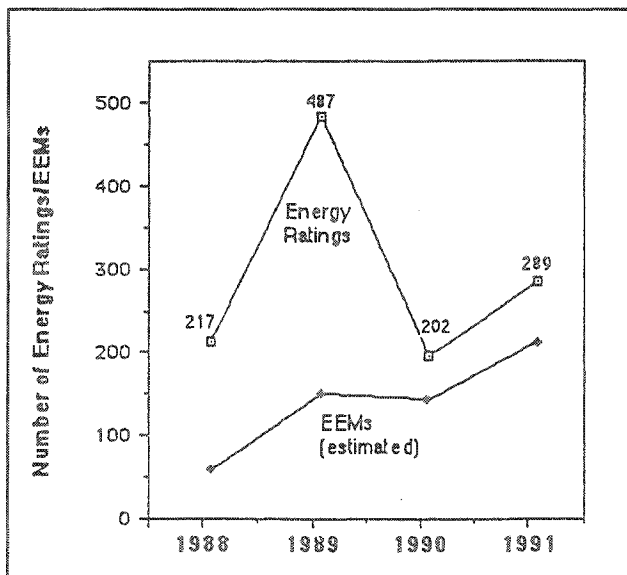


Figure 2. Number of Energy Ratings and EEMs Processed Annually Since Program Inception

Market Barriers

Market barriers to the Vermont EEM program are listed below:

EEMs Complicate the Mortgage Process

The mortgage process works smoothly without the inclusion of the energy component. Lending guidelines for EEMs with energy improvements are complicated, unclear

and add another element of complexity, more time and paper work to a process that is already perplexing and paper-laden. Without clear benefits, it is easier for those in the mortgage process not to use EEMs. Additionally, home buyers are generally not concerned enough about future energy costs in the house they plan to buy to go through the added hassles of using an EEM.

Mortgage Qualifying Perceived as Only Program Use

Most of the incentives offered to date which encourage participation have been for mortgage qualifying for already-efficient homes. Therefore, if a prospective borrower does not need the EEM incentives to qualify for a mortgage, they are not routinely made aware, or encouraged to, use the program.

Limited Benefits/Incentives for EEMs with Improvements

Lenders and real estate agents will use the EEM increased debt-to-income ratios to qualify borrowers for efficient homes because it enables the sale to take place, which benefits all parties. However, with inefficient homes, future energy savings and the potential of increased property values will only benefit the home buyer, while potential risks and delay confront the other mortgage participants. Therefore, only when a home buyer or other associated party is well aware of the EEM program and insists on financing energy improvements as part of the mortgage, will the EEM improvement program be used.

Potential Delay and Risk

Those in the mortgage process are reluctant to embrace anything new that they perceive as potentially hindering or delaying the home sale process unless there is some clear benefit for them. Potential delays and added risk of inadequate work, cost overruns, etc. without commensurate compensation cause those in the mortgage process to either not mention the EEM or to discourage home buyers from using the program.

Inadequate Data for Valuing Energy Improvements

A major obstacle in the EEM process is the determination of the value of energy improvements. Sufficient data is not available for appraisers to determine the value of specific energy improvement measures.

Opportunities

An effective EEM program which encourages the energy upgrading of existing homes can be achieved through a number of initiatives designed to stimulate the market, including:

A Lower Mortgage Interest Rate for EEMs

An interest rate which is lower than conventional mortgage rates for energy efficient properties would encourage use of the EEM program by home buyers. As a result, lenders and real estate agents who offer and promote EEMs would increase business by attracting more buyers. The home buying market would encourage the industry to meet its desires by moving their business to lenders and real estate agents offering EEMs.

Simplified Underwriting Guidelines

Underwriting procedures that make it easy for the borrower to obtain an EEM or refinance and include the cost of energy improvements in the loan are imperative for a successful program. It will take changes to the guidelines of the secondary market lenders (Fannie Mae, Freddie Mac, HUD, VA and local Housing Finance Agencies), which may or may not be possible.

Mortgage Insurance for Loans with Greater than 95% Loan-to-Value Ratios

A key to the use of the EEM by low down-payment buyers for financing energy improvements is mortgage insurance that will cover mortgage loan-to-property value (LTV) ratios higher than the conventional maximum of 95%. To permit low down-payment borrowers to take out larger loans to cover energy improvement costs as part of the EEM, either an insurer needs to be located that will allow higher LTV ratios for EEMs, or some entity (such as utility company, pension fund pool, state treasurer, etc.) needs to provide coverage for the loan exposure above 95%.

Lender Commitment to Promote the EEM Program

Once an attractive EEM product is available, it will need to be promoted through participating lenders.

Real Estate Agents and the Promotion of the EEM

If an attractive low interest rate EEM product were available and lenders were promoting it, real estate agents would become drawn in as a result of the interest from home buyers. Additionally, legislation requiring disclosure of a home's energy inefficiencies to the buyer at the time of sale would encourage more use of the EEM--the attractive solution to the problem of an energy inefficient home. Lastly, a real estate agent commitment to inform all potential buyers about the EEM would go a long way towards educating the right party--the home buyer--about the EEM at the right time in the home buying process.

Utility Support

If energy ratings and the EEM can be tied into utility demand-side management (DSM) programs, the associated promotion and use of ratings could strengthen the energy rating and EEM programs. It is important to establish a clear separation between the rating/EEM programs and utilities in order to maintain objectivity and the perception of an unbiased, fuel-neutral program. There appear to be a number of opportunities for utilities to offer third party-generated energy ratings and the corresponding link to the EEM as an incentive to increase participation in DSM programs. Free energy ratings and utilization of the EEM may be an effective lure to encourage builder participation in new construction and other DSM programs.

Conclusion

Energy ratings and the EEM can provide information and access to effective energy saving opportunities while making housing more affordable and financially accessible to marginal buyers. The shelter industry catches on in a relatively short time to using energy ratings and the EEM to help qualify marginal buyers for already-efficient (mostly new) homes because it helps their businesses. This will tend to produce *some* energy savings, but the real energy-saving opportunities lie with existing, inefficient homes. The challenge for impacting significant energy savings is to make the EEM easier to use and to provide incentives besides future energy savings so that the EEM for energy improvements becomes a desired product. As the present EEM is designed, there is not enough to motivate the mortgage industry to use EEMs. But a user-friendly, lower interest rate EEM has the potential to move a difficult market and significantly impact energy savings.