

About SIPs and the ENERGY EFFICIENT MORTGAGE

Frequently Asked Questions (FAQs) from Home Buyers about the Energy Efficient Mortgage

Q: Why should I buy an energy efficient SIP home?

A: Energy efficient SIP homes cost less, have improved comfort, and create less pollution. An energy efficient SIP home will use less energy for heating, cooling, and water heating as compared to a standard home. Compared to the average house, an efficient home can save up to a third or half on home energy costs.

Energy efficient SIP homes use less energy, but feel warmer in the winter and cooler in the summer. The air quality may even be better in an energy efficient home, as improved duct systems will provide balanced airflow to all of the rooms along with controlled air exchange.

Energy efficient SIP homes also create less pollution. The average home produces twice as much greenhouse gas pollution as the average car. So reducing the amount of energy used in a home can drastically decrease the amount of pollution created to generate the electricity for homes.

Q: What is Fannie Mae's EEM?

A: Fannie Mae's EEM (Energy Efficient Mortgage) can help you purchase an energy efficient SIP home. The EEM recognizes that energy efficient SIP homes cost homeowners less to operate on a monthly basis than standard homes because they use less energy. Home buyers who choose energy efficient SIP homes can afford to spend more on their housing expenses because they will likely spend less on their energy costs.

Q: How does the EEM benefit the borrower?

A: The EEM benefits the borrower in several ways. First, the estimated energy savings are added to the borrower's income to allow the home buyer to qualify for a larger total mortgage amount. Second, by increasing borrowing power, the EEM allows borrowers to include the costs of energy improvements into the total mortgage amount. 100% of the energy improvements, up to 15% of the value of the home, can be financed and paid for over the life of the mortgage, reserving the borrower's cash for more immediate, move-in costs. Third, the value of the home is adjusted by the value of the energy efficiency improvements.

Q: What types of homes can qualify for the EEM?

A: The EEM can be used for one-unit, single-family, owner-occupied principal residences, PUDs, and condominiums. The homes may be new construction or existing housing.



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Q: Can a home that is already an energy efficient SIP home qualify for the EEM?

A: Yes, the EEM can be used for homes that are energy efficient at the time of purchase.

Q: What types of transactions can the EEM be used for?

A: The EEM can be used for both purchase and refinance transactions. The standard EEM can be used for limited cash-out refinances.

Q: How does a home qualify for the EEM?

A: Existing homes must have a Home Energy Rating System (HERS) report to evaluate the home's energy efficiency in its current state or to identify opportunities for cost-effective energy efficient upgrades.

If the SIP home was newly constructed, the home can have a HERS report or the builder may have followed the guidelines of a Prescriptive Program such as EPA's Energy Star Builder Option Program (BOP) that specifies the energy efficiency measures in the design and construction process. EPA's BOP provides the builder with the specific energy measures to incorporate in the home design such as the SIP envelope that will result in an energy efficient home program. After completion, the home is evaluated with a HERS rating.

SIP Supply is recognized as an Energy Star Partner for providing an energy efficient building product.

Q: What is a HERS report?

A: The home energy rating (HERS) is a standard measurement of the home's energy efficiency. An energy rating allows a home buyer to easily compare the energy costs for the homes being considered. Home energy ratings involve an on-site inspection by residential energy efficiency professional -- a home rater. Home energy raters are trained and certified by the operating home energy rating system.

The home energy rater inspects the home and measures its energy characteristics, such as insulation levels, window efficiency, wall-to-window ratios, the heating and cooling system efficiency, and the solar orientation of the home. Diagnostic testing, such as blower door for leakage and duct leakage testing, is often part of the rating. The home receives a point score between 1 to 100, depending on its relative efficiency. An estimate of the home's energy costs is also provided. A homeowner who wants to upgrade the energy efficiency can use the energy rating to evaluate and pinpoint specific, cost-effective improvements.



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Q: How does the home energy rater produce the HERS report?

A. The home energy rater inspects the home and measures its energy characteristics, such as insulation levels, window efficiency, wall-to-window ratios, heating and cooling system efficiency, solar orientation of the home, and water heating system efficiency. Diagnostic testing may also be done, which includes using a “blower door” test to check for air leakage and testing for duct leakage. The results of the inspection are entered into the home energy rating system. The system uses data regarding the local climate and utility costs, and the data about the specific home to produce a written report.

The HERS report includes an energy efficiency rating score between 1 and 100. The higher the score, the greater the energy efficiency. A sample HERS report is included in this document.

Q: How does a home constructed as energy-efficient qualify?

A: The HERS report compares the SIP home against a similar home without the energy efficient design (often called the “reference home”). The rating should confirm that the final construction achieves the intended design and performance. For homes that are already energy-efficient, the HERS report will provide the following data required by the Lender for an EEM:

- Estimated monthly energy savings
- Value of the energy efficient measures – known as the Energy Savings Value

Q: What is the rationale for adding to the value of the property?

A: The energy efficiency measures in a home add value to a property, however, this value may be difficult to assess during the appraisal process. The HERS report provides the amount of additional value specific energy efficiency measures will add to a home’s total value.

Q: How is present value of the energy savings calculated?

A: The energy rating report will provide the Lender with the present value of the energy savings.

Q: Why is a present value calculation necessary?

A: The present value calculation accomplishes two things. First, in new construction or for a SIP home energy efficient “as-is,” it may not be possible to isolate the installed costs of the energy measures. So, the value we attribute is the energy savings over the expected physical life of the equipment. Second, for homes that will benefit from energy improvements, the present value calculation is used to determine whether the energy improvements are cost effective.



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Q: What is meant by cost effective?

A: The benefit the borrower will receive in energy savings must exceed the cost to install them to be considered energy efficient. If the benefits do not exceed the installed costs, then the improvements are not cost effective and the property would not qualify for the EEM. Using Panels from SIP Supply, the homeowner will realize up to 60% energy savings, and only marginally more expensive than traditional framing. SIPs prove to be cost effective

Q: What is the typical cost of an energy rating?

A: The cost for a home energy rating is generally between \$150 and \$400. Some utility companies and/or government agencies may offer programs to subsidize the cost of the rating.

Q: Can the cost of the energy rating be included in the mortgage?

A: The cost of the energy rating is considered a transaction cost, similar to the costs incurred for an appraisal or a home inspection, and should be treated like these transaction costs.

Q: Which Lenders offer the EEM?

A: The current list of lenders that can offer the EEM is available on www.fanniemae.com or www.efanniemae.com.



About the ENERGY EFFICIENT MORTGAGE (EEM)

NOTE: An example of a HERS report for an existing home in need of energy improvements is shown on the next two pages:

Sample HOME ENERGY RATING REPORT

Energy Rater: Joe Rater
Rater ID #: 123456
Rating Date: March 1, 2000
Report Date March 5, 2000

Page 1: Existing condition
Property Address: 124 West Third Street
Anytown, USA 12345

EXISTING HOME ENERGY RATING:

58 ●●●●

EXISTING CONDITIONS

Property Type: TWO STORY on CRAWL SPACE
Conditioned floor area: 2380 square feet

Envelope Characteristics

Insulation levels: Floor = R-0, Walls = R-0 to R-11, Ceiling/Roof = R-19
Windows: single-glazed
Overall infiltration: 1.000 air changes per hour
(determined by an on-site "blower-door" test)

Space Heating, Cooling, and Domestic Water Heating Systems

Space heating: electric baseboard
Cooling system: electric window/wall unit
Thermostat(s): manual
Water heating: 50 gallon electric

Energy Source Utility Company

Electric: River Valley Power
Natural Gas: n/a
Other Fuels: n/a

Not only does SIP Supply SIPs rate well when tested for HERS but they also qualify for LEEDs credits.

Estimated Energy Usage and Costs

Description		Energy Use		Energy Cost
Space heating	37.5%	46.84	MBTU	\$724.18
Space cooling	31.1%	38.90	MBTU	\$871.37
Water Heating	17.1%	21.32	MBTU	\$386.15
Other Energy Uses	14.3%	17.85	MBTU	\$323.31
TOTAL	100.0%	124.91	MBTU	\$2305.01



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HOME ENERGY RATING REPORT

Page 2: Recommended Improvements

IMPROVED ENERGY RATING:

84 ● ● ● ● ● ● ● ●

RECOMMENDED IMPROVEMENTS

NOTE: This sample rating is recommends upgrading insulation to R-10 in the Walls and R-11 in the Roof.

Our Polyurethane core SIPs have a minimum built-in insulation of R-25 Walls and R-40 Roof. While this rating shows typical insulation saving approximately \$60 /mo SIPs easily save hundreds per month.

	Estimated Annual Savings	Typical Installed Cost*	Estimated Payback (in years)	Estimated Useful life of improvement
1. Install water heater & p	\$69.83	\$479.25	1.13	30.00
2. Reduce AC/hr (1.00 to	\$311.18	\$500.00	1.61	15.00
3. Install heat pump	\$1219.78	\$5000.00	4.10	15.00
4. Insulate walls to R-10	\$30.37	\$402.00	13.24	30.00
5. Insulate ceiling to R-11	\$31.54	\$542.13	17.19	30.00
Evaluated as a package	\$1365.57	\$6923.38	4.78	15.74

Lines 1-5 show the results evaluated for each individual measure. The last line is based on the measures taken as a group.

*The typical installed costs are based on national averages, weighted appropriately for the area in which the Rate home is located. It is recommended that at least three competitive bids be obtained for the improvements. The above package of recommended improvements has the following effect on the property's estimated annual energy costs and Energy Rating:

Description		Energy Use		Energy Cost
Space heating	25.2%	12.99	MBTU	\$221.07
Space cooling	6.3%	3.26	MBTU	\$67.71
Water Heating	34.0%	17.53	MBTU	\$327.36
Other Energy Uses	34.6%	17.85	MBTU	\$323.31
TOTAL	100.0%	51.63	MBTU	\$939.45

IMPROVED ENERGY RATING: 84 ESTIMATED ANNUAL ENERGY SAVINGS: \$1,365.56

SIP Supply, LLC / CommercialSIPs.com
 Consumer Web: SIPSupply.com

