

Getting the Green

For Your High-Performance Home

by Andy Kerr



Building an energy-efficient home is a winner for your pocketbook and the planet—so why is it getting short shrift from many banks and appraisers?

Building a highly efficient home will cost a little more, but it's worth it if for no other reason than you'll easily recoup the higher up-front payout through lower energy operating costs. Or maybe you want to take advantage of low interest rates by refinancing your existing home while doing some energy upgrades.

Most of us don't have the funds to build a high-performance home—or even do a few energy-efficient upgrades—without getting a loan. But convincing the bank that a high-performance home has greater value than a similar, but conventionally constructed home, is often a surprisingly difficult hurdle.

From PITI to PIETI

Roger Normand and his wife Lynn are building a state-of-the-art green home in Saco, Maine. Like many other green home-building pioneers before him, Roger has immersed himself in the ins and outs of building efficiency and green building. While their bank is supportive of their plans for a green home, the Normands' ability to obtain a construction loan is based on the appraised value of the prospective home.

Three appraisals (by two appraisers) were performed in the course of five months. Both appraisers were members of the Appraisal Institute (AI), and the second appraiser, according to Roger, had completed the AI's advanced education in green appraisals. Each considered both the "cost" and "sales" methods (see "The Art of Appraisals" sidebar) and provided a final valuation that reconciled the differences between their sales comparisons and cost evaluations.

However, the first appraiser's report gave no recognition to the home's energy-efficiency measures, though the standard Uniform Residential Appraisal Report (Freddie Mac form 70 or its equivalent, Fannie Mae form 1004) includes a line item in its value adjustments for "Energy Efficient Items."

The second appraiser's initial report listed some of the home's energy-saving features, which included passive solar design and a super-insulated building envelope, and valued the home's energy-saving attributes at \$24,800.

The third appraisal accounted for Leadership in Energy and Environmental Design (LEED; program of the U.S. Green Building Council) and other green standards, assigning them \$95,200. And it also estimated the net present value of ongoing energy savings, including 15 years of energy savings.

In Roger's experience, the appraisers just didn't "get" it—at least initially. But the appraisal was high enough that they were able to move forward with their building plans.

"If you want to build green, it's best to have deep pockets," says Roger. "It's still a very long journey ahead to find value in a green appraisal."

Roger recommends that the traditional PITI (principal, interest, taxes, insurance) mortgage lending ratio become PIETI, "where the 'E' represents the home's energy costs.

"My goal in all of this is not to artificially inflate, but rather to realistically portray energy savings in green buildings," says Roger. "Not just for our house, but for all those who really want to build or remodel a greener, more energy-efficient home. We can quibble over the market value of things such as sustainable materials, recycled content, and other LEED items, although I believe these have some market value. I also believe that the energy aspect of green buildings must be objective and quantifiable to be considered."

Fortunately, for Roger (and the rest of us), the real estate industry is moving—albeit slowly—toward recognizing the monetary value of energy efficiency and other green-building features.

Getting Green Values

"It makes sense that sustainable buildings should have more value," says Alan Simmons in *An Introduction to Green Homes* (see Access). "They are built better, are better stewards of the environment, consume less energy, and save money on energy costs. They will probably have longer economic lives and provide healthier places for people to live, as well as social benefits, in the form of less soil and water pollution and fewer carbon emissions."

Yet, understanding, appreciating, and valuing energy-efficient homes are far from routine in the world of real estate. In many places, demand for green homes is still low, so there are not many qualified green appraisers. Of the AI's 23,000 members, a database query on green appraisers yields only 67 members in 26 states—less than 0.3%—who claim or promote

Courtesy Roger Normand



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Financing Energy-Efficient Homes

Energy-efficient mortgages (EEMs), which allow a borrower to obtain a larger loan to cover the capital cost of energy-efficiency improvements, can be obtained, but are not routinely volunteered by lenders. The rationale supporting EEMs is that, due to monthly energy savings resulting from the improvements, the borrower can make a larger monthly mortgage payment.

The Database for State Incentives for Renewables and Efficiency (DSIRE) describes several energy-efficient mortgages, including ones offered through the Federal Housing Administration (FHA) and Department of Veterans Affairs (VA). Though "private," the government-controlled Federal Home Loan Mortgage Corporation (Freddie Mac) and Federal National Mortgage Association (Fannie Mae) also have EEM programs (see Access).

their green appraisal experience. The most are in California, but not as many as population or lifestyles in the state would suggest. Only 41 AI members have completed the AI's Green/Sustainability Residential Professional Development program.

Homes are usually appraised by using the sales comparison approach. If there aren't many (or any) green homes in your area, your appraiser won't get good comparables ("comps"). Further compounding the problem is that appraisers often work from multiple listing service (MLS) data, which is collected and maintained in local (usually county) databases—and most of these still do not collect information on green features.

The Green Resource Council, a project of the National Association of Realtors, seeks to "green" the MLS by including green building information in their databases. Besides

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The Normands' model of their LEED-certified, passive and active solar, super-insulated home. Three appraisals were required before the Normands were able to secure financing to build their green dream home.

The Difficulty of Evaluation

Appraisers evaluating energy-efficient, green homes now have a couple of tools to use—the Appraisal Institute’s (AI) “Residential Green and Energy Efficient Addendum” or Earth Advantage’s (EA) “High Performance Home Evaluation Addendum,” which helps document a home’s green features (see Access). The AI form is basically a checklist of features, while the EA form allows a quantification of the value of green features.

While this is a step in the right direction, neither form provides a method to calculate ongoing savings due to the use of less energy, water, and other resources, which can be capitalized to estimate the market value increase of a home.

The easiest features to quantify are energy and water savings, since they can be calculated and then compared to energy and water costs of the same home without energy-efficiency features. More difficult to quantify are things like good indoor air quality or reduced heating loads from passive solar gain. The most difficult to quantify are the use of sustainably produced or recycled materials, since their benefits accrue mostly to society rather than the individual homeowner. While there is some market value increment for green home demand, such information is only revealed when a robust market exists, and this increment is recognized in the sales-comparison approach.

counting how many bedrooms and such, the MLS would also show if a house has a solar-electric system or carries a green certification. As this data set increases, appraisers will be able to better assess the value of green features.

For new construction, appraisers typically rely on the “cost” approach (see “The Art of Appraisals” sidebar). The company Marshall & Swift, which provides commercial and residential real estate industries with cost data, is now differentiating green building costs from traditional costs. Unfortunately, not all appraisers use the M&S data, as they must pay for it.

“Green building just got going five years ago and then the housing market crashed,” says Simmons. “It is still going, but more slowly.

“It has generally been reported that the cost to build a green home usually only adds 1% to 5% to the cost of conventional construction,” says Simmons. For folks interested in building a high-performance home, that’s a cost worth paying, but most of us don’t have the deep pockets to pay for it outright—we have to be able to finance it. A savings of \$50 per month could translate into an additional \$12,000 to \$15,000 of buying power,” says Simmons.

The Struggle—& Success

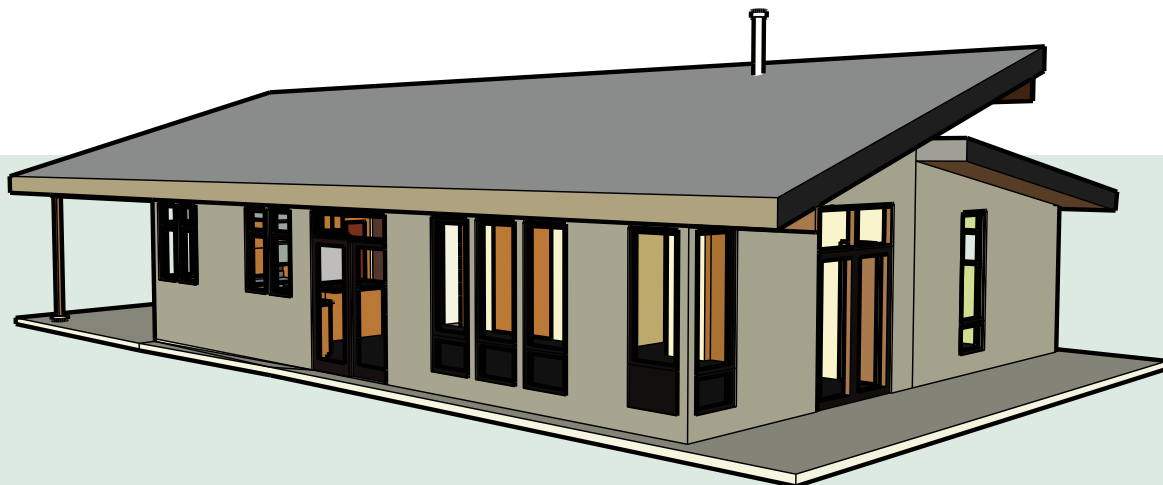
Until the market for green homes matures, what’s an energy-minded home builder to do? Though some form of green building certifications have been around for 15 years (Energy Star, for example), green building is not yet mainstream. In other parts of the country, like Seattle and Denver, green residential construction is close to 25% of the market.

“Right now, homeowners pursuing their green dream home, especially in challenging real estate markets, will need to do their homework—and then some,” says Claire Anderson, *Home Power’s* managing editor.

Anderson and her husband, Shawn Schreiner, are no strangers to green design and energy efficiency. He installs PV systems for a living and she has a background in ecology and sustainable systems, including ecological home design.

In 2009, they started researching banks to seek a construction loan. However, the banks required a licensed general contractor to oversee construction. As a former job coordinator for a national builder and with previous home building experience, Schreiner couldn’t justify spending an additional 15% to 20% on a general contractor when he could do most of the work himself or coordinate subcontractors. Although the couple had some savings to begin, they didn’t have nearly enough to fund their entire project. After hitting a wall with the banks, they negotiated private loans, with the idea that they would seek conventional financing once the house had its certificate of occupancy.

An initial appraisal gave little value to the Anderson/Schreiner home’s energy-efficiency features, although it was awarded a platinum rating by the Earth Advantage Institute.





An initial appraisal mistakenly classified these high-performance, argon-gas-filled fiberglass casement windows as conventional vinyl units and neglected to recognize the value of the home's passive solar contributions to offsetting its heating loads.

In May 2011, with the house complete, they were ready to roll their four loans into one lower-interest, conventional mortgage. Anderson had carefully researched rates and terms, and selected a local bank. The bank selected an appraiser who claimed to have experience in “green” appraisals. Even though Anderson took pains to prepare a five-page paper documenting the home’s energy-efficient and green attributes (passive solar heating, highly insulated walls and roof, high-performance windows and doors, and the Earth Advantage Institute’s platinum rating), the appraisal came in not only too low, but also inaccurate.

Rather than choosing another bank, Anderson thought that a mortgage broker might widen their financing horizons. She found a Texas-based firm that promoted EEMs, and was interested and capable. Meanwhile, she educated herself about the state of certified green appraisers in the area.

“The first few appraisers I spoke to were very ‘light green,’” says Anderson. “Their definition of green was pretty much limited to finishes—like the recycled content of carpet—while I was speaking of a ‘deeper green’ home—

things like passive solar gain and a significantly reduced energy footprint, which translates into real financial savings, year after year.”

The second appraisal was done by the only green certified appraiser in the area and, according to Anderson, “was completely different. The appraiser had another person with her who she was training. As soon as she stepped out of the car, she immediately started elaborating to her trainee about the home’s details—the overhangs that would help shade the windows in summer, the large number of south-facing windows for passive solar gain, the thermal mass in the floor, the R-values of the structural insulated panels. I felt confident that our home was finally being valued fairly,” says Anderson.

“The appraiser took an extra week to research comps and charged an additional fee for extra time invested, but her attention to detail was worth it,” says Anderson. The second appraisal came back weighted toward comps, but comps that were indeed comparable as they, too, had green and efficiency features. Although it had taken Anderson four months of effort, the second appraisal gave their home the value they needed to obtain their mortgage.

The Art of Appraisals

In the United States, there are three general approaches to appraising residences.

The **cost** approach considers the cost of building either a reproduction or replacement of the same home. Cost is a more reliable assessment for newer homes than older ones.

The **sales comparison** approach compares the features and attributes of a home with comparable (size, location, quality, age, etc.) ones. This is the most common method of appraisal for residences, and the most difficult for assessing a green home.

The **income capitalization** approach considers a property’s income-generating potential and arrives at a value based on that potential. This approach is common for rental residences.

In the end, any appraisal is an “opinion of value.” Opinion is closer to the art end than the science end of the spectrum. Yet an appraisal seeks to quantify in dollars, which is closer to the “science” of economics. A good appraiser gathers the most and best information possible and then issues an opinion—an opinion that can make or break your dream.

Most appraisers don’t like to be accused of being subjective, so they tend to rely on “data” that they can reasonably evaluate to come up with a value for a house. The problem is that while metrics like square footage, sale value, and the number of bedrooms and bathrooms are commonly accepted, metrics such as air changes per hour; floor, wall, and ceiling R-values; and window U-values and the like are not—yet.

Government Help or Helping Yourself

In 2011, the Sensible Accounting to Value Energy (SAVE) Act (S. 1737) was introduced, which would require federal mortgage agencies to ensure that energy costs are included in the underwriting process. SAVE would also direct the covered agencies to “make the necessary credit policy decisions to adjust the maximum permitted debt amounts or debt-to-income ratios for eligibility to accommodate inclusion of expected energy costs.” However, it was referred to the Senate Committee on Banking, Housing, and Urban Affairs, where it lays unaddressed.

While government can help, no one can help yourself like you can.

- **Know what you want.** Study up. If you know what you are talking about, you can tell if the “expert” knows their stuff.
- **Shop around.** If the bank or mortgage broker you’ve selected isn’t connecting, find another. Brokers can widen your financing options, since they can tap into a variety of lenders.

- **Talk a lot.** Be very clear on what you want and make them be clear in telling you what they understand your wants to be.
- **Keep trying.** Persistence and diligence could win the day.

Access

Andy Kerr (andykerr.net) writes frequently on public policy aspects of renewable energy and energy efficiency. He splits his time between Ashland, Oregon, and Washington, DC.

Energy Star • tinyurl.com/HPESEEM • Energy-efficient mortgages

Appraisal Institute • Residential Green and Energy Efficient Addendum • appraisalinstitute.org

Earth Advantage • High Performance Home Valuation Addendum • bit.ly/EAL_Addendum

Database on State Incentives on Renewables and Efficiency (DSIRE) • bit.ly/GreenLoans • Energy-efficient mortgages

An Introduction to Green Homes by Alan Simmons (Appraisal Institute, 2010)

