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Energy Improvements Add $18,000 To Homes, Say Studies

Replace old appliances with Energy Star rated appliances, turn in all your incandescent lamps and fixtures for fluorescent lamps and fixtures, perform several energy efficient home improvements and you can boost the value of your home by almost $18,000, according to a return on investment study of 10 energy efficient home improvements.

Unfortunately, there is a catch.

Appraisers haven't gotten around to including energy efficient home improvements in typical home valuations.

While that won't stop your energy efficiency savings from beating stock market returns and other investments, the value of the improvements may not show up on the appraisal's bottom line when it's time to sell your home -- for now -- according to the scientific study that focuses on California, but has implications for homes everywhere.

"It sounds too good to be true, but home owners in California now have the opportunity to reduce their financial risk by making investments in energy efficiency that earn a higher rate of return than stocks," says Rick Nevin, vice president of ICF Consulting, a Fairfax, VA-based international consulting firm working with issues involving energy efficiency, the environment, housing and community development, transportation and others.

"The ICF research does show that many permanent home energy efficiency investments are likely to increase home value by more than the upgrade cost and that is the message that appraisers are receiving in training seminars approved by the California State Office of Real Estate Appraisers," Nevin added.

Nevin's reported findings are available in two little-known scientific studies, "Evidence of Rational Market Evaluations For Home Energy Efficiency" and "More Evidence of Rational Market Evaluations For Home Energy Efficiency".

The studies conclude, for every $1 you save on your annual fuel bill, due to energy efficient home improvements, your home's value will jump by $20 or more.

Both ICF research efforts were conducted with funding from the U.S. Environmental Protection Agency and the U.S. Department of Housing and Urban Development and are based on detailed household characteristics data from 55,000 homes throughout the nation's major metropolitan areas collected by the U.S. Census in it's periodic American Housing Survey.

Nevin furthered the studies with energy efficient home improvement data from Lawrence Berkeley National Laboratory's "The Profitability of Energy Efficiency Upgrades" to produce "A Better Return Than Stocks -- With Negative Risk," a report that calculates increased home values for 10 different

energy efficient home improvements.

"Combining these studies with a 50 percent projected increase in utility bills (not an outlandish assumption in California) shows that investing in all 10 energy efficient upgrades today would yield a 23 percent return and an increase in home value by more than the total upgrade cost," Nevin said.

How was the $18,000 figure determined?
Click here to see the complete chart.

"The implication for home buyers is that they can profit by investing in energy efficient homes even if they do not know how long they might stay in their homes. If their reduction in monthly fuel bills exceeds the after-tax mortgage interest paid to finance energy efficiency investments, then they will enjoy positive cash flow for as long as they live in their homes and can also expect to recover their investment in energy efficiency when they sell their homes," according to the 1998 "Evidence of Rational Market Evaluations For Home Energy Efficiency".

Appraisers haven't caught up with the 1998-1999 studies because of a three-sided Catch 22: Appraisers say they don't calculate energy improvements because standards don't exist to accurately measure increased value from energy related upgrades. Standards don't exist, largely because the data base of home owners with energy efficient home improvements is too small to consider during a typical home sale, refinance or home equity loan appraisal. And home owners aren't compelled to help increase the data base by completing more energy efficient home improvements if they don't enjoy the increased value that typically comes with more value-tested home improvements including kitchen and bath remodels, master bedroom suite redos, room additions and other popular alterations.

"I'm not down playing these guys, but nobody has proven that statement (For every $1 you save on your annual fuel bill, you home's value will jump by $20 or more.). They are nice articles, but they aren't typical of articles from those who are in the trenches," says Apple Valley, CA appraiser Paul Jacobs of the Enterprise for Economic Excellence, which provides continuing education for appraisers.

"The Department of Energy and Pacific Gas & Electric put together a study 18 months ago. They dragged in appraisers and listened to their concerns. The net result was that they didn't believe energy efficiency can be quantified to such a degree that it can be recognized in the market place," Jacobs said.

Nevertheless, the ICF research shows how energy efficiency increases home value relative to otherwise comparable homes. It says a sharp increase in fuel prices may, in part, result in higher market values for efficient homes and, in part, result in lower values for inefficient homes.

The study cautions home owners with existing energy efficient homes from trying to squeeze out more energy efficient savings.

"These Energy Star products are great investments when you're replacing older equipment, but the electricity savings from an Energy Star heat pump will not recover the total cost of replacing another heat pump in good working order," Nevin says.

Even without appraisers considering energy improvements, Nevin says the upgrades are at least a better value than a stock market investment.

"Investors often accept lower financial returns in exchange for less risk, where "risk" refers to the short-term variation in their long-run expected return. For example, some investors prefer the lower but predictable return of money market accounts to the higher long run return of stocks because stocks can fall sharply in short run," Nevin writes in "A Better Return Than Stocks -- With Negative Risk," a paper produced from the two studies.

"The risk of investing in energy efficiency is actually negative because home owners are already subject to the risk of changing fuel prices and weather patterns that can dramatically increase utility bills."

In financial markets, investors demand higher returns to compensate for this sort of risk, but energy efficiency investments provide a great return and reduce your overall financial risk by reducing the potential variation in your utility bills," he added.

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