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*Any questions or  
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sent to  
rrrains@  
mindspring.com.*

## **Fannie Mae Launches New Energy Improvement Mortgage (EIM) Product**

by Isaac Savage

Buying a home is a smart investment. Paying high utility bills *isn't*. We all have more important things to spend our hard earned money on...don't we? Fannie Mae's new mortgage product makes it possible to actually *save money* by making your home more energy efficient and more valuable!

The idea is simple: You can borrow money to make improvements to your home that will save you more money on utility bills each month than you will spend on the mortgage payments. So, you end up with more money, more comfort, and a more valuable home!

A state-of-the-art system, recognized throughout the U.S. for rating a home's energy efficiency, is used to verify that the energy savings will indeed be greater than the mortgage payments. These "home energy ratings" make it easy to identify which improvements will provide the greatest reduction in energy consumption and provide the quickest payback.

Examples of typical improvements that you may want to consider are: adding insulation, reducing drafts by sealing air leaks, replacing windows, sealing leaky ductwork, sealing your crawl space, purchasing a high efficiency water-heater, furnace, or heat pump, and even adding *solar hot water panels to your roof!*

This type of mortgage product will really make a difference when buying (or renovating) an older home that has high utility bills. The energy savings will actually qualify you for the loan. So, if you've already borrowed as much as possible to get the perfect house, you can now receive the additional money you need for improvements without having to wait until funds become available!

An EIM is not only a fantastic way to increase your cash flow, make your home more comfortable, more valuable, and more efficient, but is an easy way to lower pollution levels in the mountains. By reducing your energy consumption at home, you are actually saving many times that amount, because only a fraction of the power made actually reaches its destination. The rest is lost during transmission. So, the less power we require of the utilities, the more CO<sub>2</sub> we prevent from entering our atmosphere.

Fannie Mae's EIM will enable more people to qualify for home loans, while improving the energy efficiency of WNC's housing stock. Thus, reducing energy demands and pollution while providing a boost to the *local economy*, not the *utility company*.

Fannie Mae has also published a great booklet (and it's FREE) for anyone interested in green homes and energy mortgages. To order your copy of Home Performance Power: Fannie Mae's Guide to Buying and Maintaining a Green Home, or for more information about other affordable mortgage options that utilize energy-efficient features, call Fannie Mae's Consumer Resource Center at 1-800-7FANNIE (1-800-732-6643), Monday through Friday, from 9:00 a.m. to 5:00 p.m. EST.

**For additional information about EIM's, including local banks that are currently pursuing Fannie Mae's Energy Improvement Mortgage product, call the WNC Green Building hotline @ 232-5080.**

# How Can I Join?

Simply fill out the form below and mail in with your membership dues.

*(dues are for one year membership)*

Name \_\_\_\_\_

Title \_\_\_\_\_

Affiliation \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_

e-mail \_\_\_\_\_

Date \_\_\_\_\_

## Membership categories:

- Individual \$35
- Business \$100
- Nonprofit \$50
- Silver Level Sponsor \$250
- Gold Level Sponsor \$500
- Platinum Level Sponsor \$1000

Total Amount Enclosed \_\_\_\_\_

## ATTENTION BUILDERS!!! FREE TRAINING OPPORTUNITY!

CP&L is sponsoring a few builders in the WNC region who would like to attend a training workshop by the building science professionals at Advanced Energy, in Raleigh, NC. Transportation is provided for this one day workshop. The training will focus on the requirements for constructing an "Energy Star" home. This training will give you the chance to market yourself as an Energy Star builder. CP&L will give your client 5% off of their power if they build an Energy Star home. This is the first step in taking your business to the next level! Be one of the first builders in WNC to offer Energy Star homes to your clients!

contact: Chris Murphy  
@ 828-271-6217 to register.

Wednesday, October 23rd  
Limited number of seats! HURRY!

### The Mission Statement:

The Western North Carolina Green Building Council is a non-profit organization whose mission is to promote environmentally sustainable and health conscious building practices through community education.



**WNCGBC**  
**PO Box 8427**  
**Asheville, NC 28814**  
**[www.wncgbc.org](http://www.wncgbc.org)**



# Upcoming Solar Decathlon to Increase Awareness

by Aaron Johnstone

## WNCGBC Members

Terry Albrecht  
James Anthony  
Marcus Barksdale  
HM Boniske  
Emily Boyd  
David Brannon  
Kitty Brown  
Mike Byrns  
Claudia Cady  
Chuck Campbell  
Carlton Craig  
Sumaya El-Attar  
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Shane Elliott  
June Engman  
Ashley Featherstone  
Ken Gaylord  
Boone Guyton  
David Hill  
Nancy Hodges  
Aaron Johnstone  
Traci Kearns  
Doug Kiefer  
Damian Keyes  
Arthur Martin  
Bobby Mchugh  
Duncan McPherson  
Cindy Meehan-Patton  
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Danny Richards  
Rob Robinson  
Isaac Savage  
John Senechal  
Travis Somerville  
Mitchel Sorin  
Bobbi Tousey  
David Tuch  
Larry Weissman  
T.K. Worde  
Sam Zimmerman

Energy consumption in the United States is an increasingly hot topic as reminders of our dependence on finite fossil fuels and our vulnerability to geopolitical instability are frequently in the news. The concept of national energy independence is frequently cited as a goal, but policy makers rarely place emphasis on reducing consumption and pursuing renewable energy as a viable alternative to our massive fossil fuel infrastructure. However, some steps are being taken to change that, with federal programs like the Million Solar Roofs Initiative, proposals to require new standards of energy efficiency for government buildings, and educational events such as the Solar Decathlon.

The Solar Decathlon is a competition sponsored by the U.S. Department of Energy with private sector co-sponsors BP Solar, The Home Depot, Electronic Data Systems, and the American Institute of Architects. Fourteen student-teams from universities here and abroad will design and build energy efficient, solar powered model homes. These will demonstrate the possibilities for renewable energy and carefully designed building systems to reduce energy use and allow consumers and the nation as a whole to create a pattern for sustainable energy use. The model homes will then be judged on a number of levels, from design and efficient building techniques to efficiency of appliances and the integration of energy consuming systems in the houses.

According to the Department of Energy's Solar Decathlon website ([www.eren.doe.gov/solar\\_decathlon/](http://www.eren.doe.gov/solar_decathlon/)), the primary goals of the competition are:

-To illustrate how solar energy can improve mankind's quality of life. Solar energy is clean; it significantly reduces pollutant emissions. And solar energy is renewable, thereby increasing our nation's energy security.

-To teach the solar decathletes and the public about how energy is used in their daily lives, and to illustrate how energy intensive

different daily activities are.

-To demonstrate that market-ready technologies exist that can meet the energy requirements of our daily activities by tapping into the sun's power.

-To meet these needs while providing a beautiful structure in which to live, work, and play.

During the course of the competition, the interdisciplinary teams (drawing



members from programs ranging from architecture and engineering to communications and the sciences) will operate their model homes, including a home-based business and household transportation needs, using only solar power generated within the perimeter of the home. The site of the competition is the National Mall in Washington, D.C., and with daily public tours as well as virtual tours available on the website, it will provide important examples of fully functional solar powered homes to potential consumers, as well as providing hands-on training for students who will become the professionals of the future. These students will be equipped with important expertise in an integrated systems approach to sustainable design.

This event is a step in the right direction, towards sustainable energy independence as a solution to problems such as energy security, pollution, wasteful energy over-consumption, and finite resources. A highly visible exhibition of environmentally sensitive technologies such as the Solar Decathlon, with government backing and the support of major companies, which are heavily invested in conventional technologies (BP and Home Depot), has the potential to greatly increase public awareness and act as a catalyst for continued investment in a sustainable future.

Let's hope that it does!

# W N C G B C C A L E N D A R



- Oct. 7, 2002 WNCGBC Monthly Board Meeting**  
5:15 – 7:00 – Land of Sky. E-mail [robin@rowhouse-architects.com](mailto:robin@rowhouse-architects.com) for info.
- Oct. 8, 2002 Energy Politics & Awareness, by ASU, Boone, NC**  
Time: 7:00pm to 8:30 pm / no cost / [www.asuses.org](http://www.asuses.org)
- Oct. 8, 2002 Mold and Moisture Workshop, Research Triangle Park, NC, by Advanced Energy**  
Time : 9:00am to 4:30pm / Cost: \$50 per person  
Contact: Victoria Hatch 919.857.9109 or [vhatch@advancedenergy.org](mailto:vhatch@advancedenergy.org)  
[www.advancedenergy.org/buildings/training/healthier\\_buildings.html](http://www.advancedenergy.org/buildings/training/healthier_buildings.html)
- Oct. 9, 2002 High Performance Affordable Housing Workshop by Advanced Energy, Hickory, NC.**  
The workshop is meant for anyone working on issues of affordable housing.
- Oct. 10, 2002 LEED Advanced Training Workshop, Norfolk, VA**  
Early registration by Oct. 3, 2002; Cost \$495 USGBC member, \$595 non-member  
Final registration by Oct. 10, 2002; Cost \$525 USGBC member, \$645 non-member  
More information at [www.usgbc.org](http://www.usgbc.org), “conference and event calendar” link.
- Oct. 10, 2002 Mold and Moisture Workshop, Kingston, NC, by Advanced Energy**  
Time : 9:00am to 4:30pm / Cost: \$50 per person  
[www.advancedenergy.org/buildings/training/healthier\\_buildings.html](http://www.advancedenergy.org/buildings/training/healthier_buildings.html)
- Oct. 10, 2002 LEED Advanced Training Workshop, Norfolk, VA**  
Early registration by Oct. 3, 2002; Cost \$495 USGBC member, \$595 non-member  
Final registration by Oct. 10, 2002; Cost \$525 USGBC member, \$645 non-member  
More information at [www.usgbc.org](http://www.usgbc.org), “conference and event calendar” link.
- Oct. 15, 2002 Permaculture / Land Rehab, by ASU, Boone, NC**  
Time: 7:00pm to 8:30 pm / no cost / [www.asuses.org](http://www.asuses.org)
- Oct. 24, 2002 Healthy Home Seminar Series**  
Energy Efficient Mortgages 6:15 7:30 Lord Auditorium @ the Pack Library
- Oct. 22, 2002 Wind Power Production, by ASU, Boone, NC**  
Time: 7:00pm to 8:30 pm / no cost / [www.asuses.org](http://www.asuses.org)
- Oct. 29, 2002 Biomass for Alternative Transportation, by ASU, Boone, NC**  
Time: 7:00pm to 8:30 pm / no cost / [www.asuses.org](http://www.asuses.org)
- Oct. 29, 2002 Healthier Housing, Asheville, NC, by Advanced Energy**  
Time : 9:00am to 4:30pm / Cost: \$50 per person Contact: Victoria Hatch 919.857.9109 or [vhatch@advancedenergy.org](mailto:vhatch@advancedenergy.org) / For other available locations across the state see the web page.  
[www.advancedenergy.org/buildings/training/healthier\\_buildings.html](http://www.advancedenergy.org/buildings/training/healthier_buildings.html)
- November, 2002 Building Thailand’s First Earthen Village (in Thailand)**  
[www.sulak-sivaraksa.org](http://www.sulak-sivaraksa.org) or [www.kleiwerks.com](http://www.kleiwerks.com)
- Nov. 5, 2002 Recycling in Watauga & ASU, by ASU, Boone, NC**  
Time: 7:00pm to 8:30 pm / no cost / [www.asuses.org](http://www.asuses.org)
- Nov. 9, 2002 Healthy Home Semiar by Home Energy Partners**  
Lord Auditorium from 10:00am to 12:00 am
- Nov. 11, 2002 WNCGBC Monthly Board Meeting - Annual Elections Meeting!!!**  
5:15 – 7:00 – Land of Sky E-mail [robin@rowhouse-architects.com](mailto:robin@rowhouse-architects.com) for info.
- Nov. 12, 2002 Micro-Hydroelectric Power, by ASU, Boone, NC**  
Time: 7:00pm to 8:30 pm / no cost / [www.asuses.org](http://www.asuses.org)
- Nov. 13-15, 2002 First Annual USGBC International Conference and Exposition, Austin, TX**  
Late registration after Sept. 14, 2002; Cost \$500 USGBC member, \$575 non-member, \$75 student  
More information at [www.usgbc.org](http://www.usgbc.org), “conference page” link.
- Nov. 13-15, 2002 Brownfields 2002 Conference, Charlotte, NC**  
No cost [More information at www.brownfields2002.org](http://www.brownfields2002.org)
- Nov. 15 & 16, 2002 Home-Scale Wind Workshop, Appalachian State University, Boone NC**  
Instructor: Mick Sagrillo For additional information call 828-262-6358 or 6361.  
E-mail: [scanlindm@appstate.edu](mailto:scanlindm@appstate.edu).
- Nov. 18, 2002 WNCGBC Public Forum-Indoor Air Quality - Lord Auditorium at Pack Memorial Library.**  
A reception will take place from 5:00 to 5:30pm. The program will begin at 5:30 and run until 7:00pm.
- Nov. 19, 2002 Bio-Fuels and Bio-Diesel Technologies, by ASU, Boone, NC**  
Time: 7:00pm to 8:30 pm / no cost / [www.asuses.org](http://www.asuses.org)
- Nov. 21, 2002 Healthy Home Seminar Series**  
Building Among the Trees 6:15 7:30 Lord Auditorium @ the Pack Library
- Dec. 2, 2002 WNCGBC Monthly Board Meeting**  
5:15 – 7:00 – Land of Sky. E-mail [robin@rowhouse-architects.com](mailto:robin@rowhouse-architects.com) for info.

If you have an event to add to the WNCGBC Calendar, please contact [robin@rowhouse-architects.com](mailto:robin@rowhouse-architects.com).  printed on recycled paper



# The Mold Business

by Ashley Featherstone

What is this mold business? If mold has always been around, why are we hearing so much about it now? Who are the key players? What do I need to know about mold? These are the questions that will be addressed in this article.

In recent years, the public has become more informed about the dangers of mold contamination indoors. The media have run many stories about major lawsuits and health problems linked to mold. The mold business has become a huge enterprise nationwide. Mold has been called the “next asbestos”. “Mold is gold” is now a common slogan in the industry. Key stakeholders in this business include insurance companies, restoration contractors, industrial hygienists and/or environmental health professionals, lawyers, building managers, realtors, homeowners, and building occupants.

Mold is a member of the Fungi kingdom. Unlike plants, fungi lack chlorophyll and must rely on the digestion of plants and other organic matter for nourishment. Fungi play an important role in the ecosystem by breaking down and consuming dead organic matter. Mold is everywhere in the environment, indoors and outdoors. Outdoor mold concentrations are considered to be normal, background mold levels. Mold can be a problem when environmental conditions cause it to grow at a high rate indoors. Mold only grows under certain conditions. It requires moisture, food, and oxygen to thrive. Building materials such as wood, paper, carpet, insulation, and drywall act as a food source. Moisture control is the key to mold control. Introduce water and you have all of the right conditions for mold to grow indoors. This doesn't mean that anytime you have a water loss indoors you will have a mold problem. Quick attention and rapid drying within 24 to 48 hours can prevent a mold problem. Areas in buildings where moisture may accumulate and mold commonly occurs include bathroom tile, basement walls, near leaky plumbing fixtures, and around windows where water may enter. Common sources of water problems include leaky roofs, leaky plumbing, inadequate drainage from rainwater runoff, condensation associated with high humidity or cold spots in the building, and flooding due to malfunctions of

## ELECTIONS!

Time for elections is here again. Our November Board meeting will serve as our new election day. If you are interested in serving as a board member, or an executive member, contact robin@rowhouse-architects.com. Please come to voice your vote at this important meeting.

Saturday, December 7, 2002 will be the Strategic Planning Session for the upcoming year. The new officers will definitely want to attend!!



### Mold Prevention Tips<sup>1</sup>

- Fix leaky plumbing and leaks in the building envelope as soon as possible.
- Watch for condensation and wet spots. Fix source(s) of moisture problem(s) as soon as possible.
- Prevent moisture due to condensation by increasing surface temperature or reducing the moisture level in air (humidity). To increase surface temperature, insulate or increase air circulation. To reduce the moisture level in air, repair leaks, increase ventilation (if outside air is cold and dry), or dehumidify (if outdoor air is warm and humid).
- Keep heating, ventilation, and air conditioning (HVAC) drip pans clean, flowing properly, and unobstructed.
- Vent moisture-generating appliances, such as dryers, to the outside where possible.
- Maintain low indoor humidity, below 60% relative humidity (RH), ideally 30-50%, if possible.
- Perform regular building/HVAC inspections and maintenance as scheduled.
- Clean and dry wet or damp spots within 48 hours.
- Don't let foundations stay wet. Provide drainage and slope the ground away from the foundation.

<sup>1</sup>"Mold Remediation in Schools and Commercial Buildings". 2001. US EPA 402-K-01-001.

appliances and other catastrophic events. High humidity present for extended periods of time can also cause mold to grow on porous surfaces.

### Mold and Health Effects

Building related symptoms associated with mold often include nose, throat, and eye irritation, sneezing, runny nose, coughing, headache, skin rash, shortness of breath, fatigue, and exacerbation of asthma. Building related symptoms normally go away when you leave the building for a period of time. If you see mold, smell mold, suspect unaddressed water damage, or experience building related symptoms, you may have a mold problem. There are many different kinds of mold. All molds have the potential to cause health effects. Allergic reactions are very common and capable of triggering asthma attacks in susceptible individuals. Some molds have toxic and irritant effects on the body. In addition to allergic reactions and asthma, hypersensitivity pneumonitis, and other immunologic effects are well documented. Molds are also known to produce mycotoxins and microbial VOCs that have been linked to symptoms and other health effects. There is still debate among the scientific community

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regarding some of the evidence and health related claims linked to mold. More research is needed in this area. However, there is agreement between the EPA and the CDC that mold does cause health problems. For more information on the EPA and CDC positions on mold and health effects, please see Appendix B of "Mold Remediation in Schools and Commercial Buildings", 2001, US EPA 402-K-01-001. The CDC has concurred with the EPA on the findings presented in Appendix B. The document is available at: <http://www.epa.gov/iaq/molds/index.html>.

### **Misconceptions about Mold**

There are a few misconceptions about mold. Many people think killing mold will solve the problem. This is not an effective strategy because mold spores are capable of causing health effects regardless of whether they are dead or alive. Biocides are not an effective substitute for source removal and cleaning. Removing the moisture or source of the problem is the first step. Next, remove the mold by cleaning and drying the affected surface. Porous building materials such as drywall, insulation, carpet, and upholstery cannot be effectively cleaned of mold contamination. Semi-porous (wood and concrete) and non-porous (metal, glass, plastic) materials can be cleaned. It is important to take proper safety precautions including the use of personal protective equipment and setting up containment to prevent the spread of mold spores to noncontaminated areas of the building. For large jobs, hire a professional. Mold remediation contractors can be found in the yellow pages under "Fire and Water Damage Restoration Contractors". For more information about mold remediation and hiring an experienced remediation contractor, check the recommendations of the EPA and the North Carolina Department of Health and Human Services which can be found at the following links: <http://www.epa.gov/iaq/molds> and <http://www.schs.state.nc.us/epi/oii/mold/>.

Another common misconception about mold involves testing. Everyone wants to have his or her house "tested" for mold. While testing is available, it is expensive. In most cases, the EPA does not recommend testing for mold because you can usually fix your problem for less money than you would have to pay for testing. If you know you have a mold problem (you can see it and/or smell it), you need to correct it and there is no benefit to be gained from testing. Testing known as "clearance sampling" is often recommended after a large mold remediation project has been completed in order to insure that mold levels are back within normal ranges as determined by comparison with an outdoor reference sample. Another case where testing is justified would be for documentation relating to a medical condition or litigation. Lastly, if several building occupants are experiencing building related symptoms and there is a possibility of a mold problem but direct evidence is lacking, that might be a situation where testing could be helpful as part of an investigation. To find companies that do testing, check the yellow pages under "environmental consultants" or "safety consultants". The American Industrial Hygiene Association has a list of professional industrial hygienists that can often do mold testing on their website at: <http://www.aiha.org/ConsultantsConsumers/html/consultantslist.asp>

Home inspectors charge less than environmental consultants and they can often identify sources of water problems that can lead to mold growth in your home.

### **Mold and Insurance**

Most insurance companies have an exclusion for mold. However, they will often pay for mold remediation if it results from a covered loss such as a flood caused by a malfunctioning appliance. Insurance companies never pay for mold that results from inadequate home maintenance. This new mold business has had a huge impact on the insurance industry. Insurance companies are starting to set limits on what they will pay for mold related claims. In June, the California State Senate approved legislation that would require insurance companies to cover mold damage. The Florida Department of Insurance held hearings this summer to gain input on whether insurance companies operating in their state should be required to cover mold. This was in response to over four hundred insurance companies contacting them and requesting exclusions or limits on coverage for mold. State insurance commissions in North Carolina, Louisiana, and Texas have already capped (or are trying to cap) mold related clean up costs. Expect rising insurance premiums and changes regarding mold coverage.

### **Mold Regulations**

California passed the Toxic Mold Protection Act in 2001. This law became effective in January of 2002 and requires mold problem disclosure for property transactions and rental property. Mold related legislation is being proposed in several states right now. The really big news is that federal mold legislation was proposed by Congressman John Conyers, Jr. (D-MI) this year. HR 5040, known as the Melina Act, is designed to prevent consumers and prospective home buyers from moving into mold infested buildings, provide recourse for home buyers and renters who are exposed to unsafe levels of mold, and protect the public by forcing the EPA and CDC to set standards for mold exposure. This bill will be reintroduced in the next session of congress with changes that are not known at this time.



## **P U B L I C F O R U M U P D A T E S**

**The most recent public forum was on the topic of insulation. If you would be interested in finding out more information, contact one of the following people:**

**Icynene - Gabe Farkas, 888-946-7325  
gfarkas@icynene.com**

**Formaldehyde Free - John Mansville Co.,  
800-654-3103,  
www.jm.com**

**Cellulose - MWB R-Pro Corp, 828-669-4525,  
markbarker@mwbconstruction.com**

**Hebel Autoclaved Aerated Concrete BABB International, 800-994-3235  
www.babb.com/aac**

**Our next public forum will deal with the issue of Indoor Air Quality. The forum will be held on November 18, 2002 at Lord Auditorium in the Public Library. A snack reception will be held from 5:00 - 5:30. The presentations will run from 5:30 to approximately 7:00!!! We hope to see you !!!**