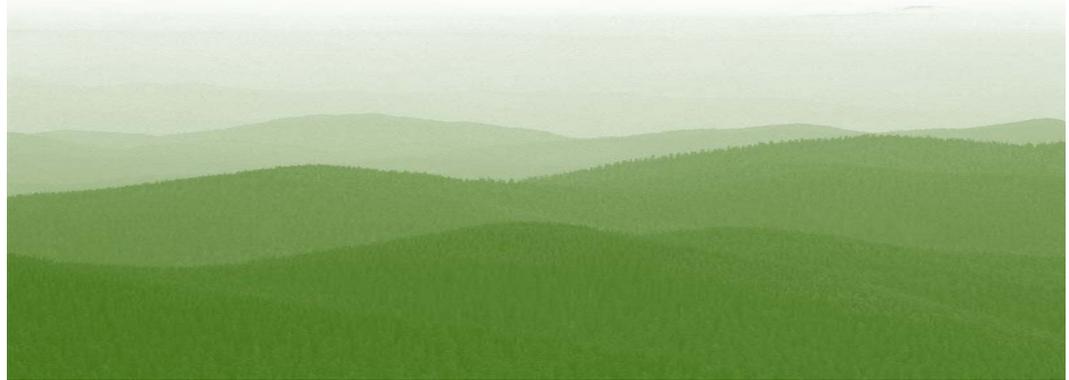


**WNCGBC**

**2007 Issue #2**



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## WNC Green Building Council News

**Your Shopping Dollars Can Now Benefit WNCGBC**  **giveline**  
Make a Difference When You Shop!

Giveline.com is an online store created for the community-minded shopper, offering more than a million bestselling products including books, movies, music, electronics, housewares, gifts and more. Every purchase generates a substantial donation to WNC Green Building Council – an amazing average of 16% of store sales, sometimes as high as 33%. The only difference between Giveline and other major online retailers is that every purchase earns money for our organization. Check it out today, and if you decide to buy, remember that WNCGBC will earn significant funds in support of our mission!" Get FREE SHIPPING using this discount code: NCD07 ... More GBC News on page 2

### WNC News and Noteworthy

#### City of Asheville Goes for the Gold

At the April 24th City Council meeting, late into the evening, the City Council adopted a LEED resolution to certify all municipal buildings over 5000 square feet at the Gold level. Additionally, the city agreed to reduce its carbon emissions by 2% per year until it has reached the goal of a 80% total reduction in carbon emissions.

#### Buncombe County and CFLs

Currently there is no proper disposal facility for Compact Fluorescent Light Bulbs in Buncombe County, but that may be about to change. There is currently a proposal up for consideration that would allow citizens to dispose of the mercury-containing bulbs at their local volunteer fire department.

#### WNC Residential Energy Survey

Visit [www.OurSouthernCommunity.org/](http://www.OurSouthernCommunity.org/) and take the Community Energy Survey. The data is being compiled to help asses our communities energy needs and willingness to reduce energy consumption.  
 ....More News on page 9



A Local Solution to Global Pollution

#### Introducing Appalachian Offsets

The WNCGBC is proud to announce its newest educational outreach program, Appalachian Offsets. Concerned individuals and businesses have a new way to make a difference in the amount of greenhouse gasses that are released into the air in our local community. Appalachian Offsets is a nonprofit, voluntary carbon offset program to combat global warming through local renewable energy and efficiency projects in Western North Carolina. The program is a three step process. First, visit [www.AppalachianOffsets.org](http://www.AppalachianOffsets.org) and calculate your "carbon footprint". Second, reduce as much energy as you can and third, offset the rest. The tax deductible donation will be spent on energy efficiency and renewable energy projects in local affordable housing that would not have been possible without the offset donation.

...Continued on Page 8

#### HealthyBuilt Homes Update



The number of homes certified as of 5/18//2007 is 51!

The number of homes in progress as of 5/18/2007 is 178!

For a list of all registered builders visit:

[www.HealthyBuiltAsheville.org](http://www.HealthyBuiltAsheville.org)

## WNC Green Building Council News Continued.....

### Greening Black Mountain Initiative Update

WNCGBC has been working with Rainbow Recycling on promoting the Change a Light, Change the World Campaign throughout Black Mountain. They have been distributing (selling) compact fluorescent light bulbs (CFL's) at their Sustainability Film Series, The Shopper's Expo, and to local organizations and businesses. So far The Town, WNCGBC, and Rainbow Recycling have collectively distributed 315 13-watt CFL's and six water conservation kits since February 2007!



Future events in Black Mountain include a small-guided green home/building tour in Black Mountain on June 23 from 10:00am-1:00pm. WNCGBC is coordinating with homeowners/building owners as well as the Town of Black Mountain for van donations for the event. Another upcoming event is an 'Energy Day' scheduled for June 30 with an informational movie(s) (IE: Kilowatt Ours), food, and tables with local organizations/companies present to talk about energy, green building and the environment.

### Water conservation Kits available- Save Resources and Money Now!!



The GBC has been offering water conservation kits at all of its events for only \$5. They normally retail for \$15 and will save up to \$50 in hot water savings. The kits include a low flow showerhead, bathroom faucet aerators, toilet leakage tablets and a

toilet tank bag.

### Green Building Information at Local Permit Offices

There are now green building resources available to builders, developers and homeowners at three local building permit offices. The Town of Black Mountain, City of Asheville and Buncombe County permit office now have green building kiosks with information on Energy Star, Healthy Built Homes as well as technical fact sheets aimed at expanding the incorporation of sustainable construction practices into the WNC building community.



We would like to thank the directors of these permit offices for doing their part to promote more sustainable building practices in our communities. If you know of other permit offices that might be interested in having a green building kiosk, please contact us.

### International Reporters Converge in WNC to Learn About Global Warming

On April 19<sup>th</sup>, Southern Alliance for Clean Energy, a clean energy advocacy organization, with offices in Asheville, NC, hosted a group of international reporters to learn about local, state and regional efforts to address global warming. Participating organizations included the WNC Green Building Council, Sundance Power, Environmental Defense and the owners of the newly constructed LEED certified Campbell Office-Building in Black Mountain, where the event was hosted.



As part of a U.S. State Department tour, nearly 15 reporters from countries around the world, including Japan, Germany, France, Spain, and Korea attended the press briefing. Western

North Carolina was chosen as an example of what local communities can do to reduce the effects of global climate change. While the United States lags behind other countries in taking action on global warming, speakers took the opportunity to educate the reporters about numerous efforts among citizens and decision-makers across the Southeast to step up and address the issue. In North Carolina and South Carolina, for example, the legislature and governor respectively created global warming stakeholder commissions to seek solutions to and understand impacts from global warming. Here in WNC, Mayor Bellamy and the City Council of Asheville are committed to reducing global warming pollution in our community, along with 59 other Southeastern Mayors as part of the U.S. Mayor's Climate Protection Agreement.

### WNCGBC Enters Partnership with Castle Keep

Due to the tremendous growth of NC HealthyBuilt Homes of Greater Asheville, we are excited about the opportunity to work with CastleKeep, a division of BuilderRadius to make the program simpler for builders and simpler for us. Builders and raters will soon have online access to registration, payment and data management. Our partnership will help us keep our administrative costs down by making information easier to track and improve our customer service, making information easier to access for builders, developers and architects.



## Priority Legislation From The NC Sustainable Energy Association

### State

**Promote Renewable Energy/Efficiency (S3 and H77)** would make North Carolina a renewable energy leader in the Southeast by requiring a certain percentage of energy produced and generated in North Carolina to be generated from renewable energy or energy efficiency.

[www.ncga.state.nc.us/Sessions/2007/Bills/House/HTML/H77v1.html](http://www.ncga.state.nc.us/Sessions/2007/Bills/House/HTML/H77v1.html)

**Energy Devices That Use Renewable Energy Devices (S670/H1187)** would ensure homeowner's solar access by voiding household association covenants and restrictions banning the installation of renewable energy devices. This bill would go even further by forbidding local ordinances from restricting the installation of renewable energy devices. The General Assembly is also considering exploring more complex energy issues through a bill entitled **Study Electric Power Issues (H1825)**.

**State Energy Office Funds (S939/H839), Funds for NC Solar Center (S1222), and University Renewable Energy Funding (H1979)** will appropriate funding to these North Carolina energy leaders. Programs administered by these centers have saved the state \$61 million in the past few years. If these programs are not funded in 2007, North Carolina will lose mission critical that have helped thousands of citizens, businesses and state agencies cut utility bills and spend more money on creating jobs.

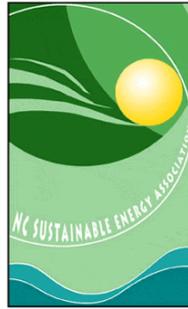
The **North Carolina GREEN Act (S634/H557)** would establish the NC Green Business Fund to promote small North Carolina businesses involved with bio-fuels, green building, and green entrepreneurship.

[www.ncleg.net/Sessions/2007/Bills/House/PDF/H557v1.pdf](http://www.ncleg.net/Sessions/2007/Bills/House/PDF/H557v1.pdf)

**Energy Conservation in State Buildings (S668/H557)** would require new state-owned buildings to meet high performance building standards and reduce water consumption. The state would be required also retrofit existing buildings with low-cost high-return energy efficiency measures.

**University/Community College Energy Savings (H1660)** would provide proper financial incentives for retrofits by allowing university and community colleges to retain any savings from energy efficiency to be used to fund other facility upgrades related to reducing energy and water consumption.

**Permits for Siting Wind Energy Systems (H 1827)** would establish a system of permits to be issued by the Department of Environment and Natural Resources for the siting of medium and large wind energy systems and to require operators of



these wind energy systems to obtain a permit to site their wind energy systems.

<http://www.ncga.state.nc.us/Sessions/2007/Bills/House/HTML/H1821v0.html>

**Local Energy Efficiency Incentives (H1097)**, allows the Town of Chapel Hill and Asheville to provide development incentives, such as allowing higher density development or other incentives, in exchange for significant energy conservation measures. Passed the House (114-0) and sent to Senate Finance (S539).

### Federal

**5-year extension of the Renewable Energy Production Tax Credit (HR 197)** would amend the Internal Revenue Code of 1986 to provide a 5-year extension of the credit for electricity produced from certain renewable resources. <http://thomas.loc.gov/cgi-bin/query/z?c110:H.R.197.IH>

**Federal renewable energy portfolio standard (HR 969)** would amend title VI of the Public Utility Regulatory Policies Act of 1978 to establish a Federal renewable energy portfolio standard for certain retail electric utilities, and for other purposes.

<http://thomas.loc.gov/cgi-bin/query/z?c110:H.R.969.IH>

**Rural Wind Energy Development Act (HR 1772)** would amend the Internal Revenue Code of 1986 to provide credits for the installation of wind energy property, including by rural homeowners, farmers, ranchers, and small businesses, and for other purposes

<http://thomas.loc.gov/cgi-bin/query/z?c110:H.R.1772.IH>

**Rural Wind Energy Development Act (S 673)** would amend the Internal Revenue Code of 1986 to provide credits for the installation of wind energy property, including by rural homeowners, farmers, ranchers, and small businesses, and for other purposes.

<http://thomas.loc.gov/cgi-bin/query/z?c110:S.673.IS>

**To find out who represents you in NC:**

[http://www.ncga.state.nc.us/GIS/Representation/Who\\_Represents\\_Me/Who\\_Represents\\_Me.html](http://www.ncga.state.nc.us/GIS/Representation/Who_Represents_Me/Who_Represents_Me.html)

**For more information on these bills visit:**  
[www.NCSustainableEnergy.org](http://www.NCSustainableEnergy.org)

## How to Make a Rain Barrel: Catching Gifts From Above by Sarah Tahrver-Wahlquist

### Environmental Benefits of Using a Rain Barrel

The Environmental Protection Agency (EPA) estimates that lawn and garden watering make up about 40 percent of household water use in summer months, and that a rain barrel will save most homeowners 1,300 gallons of water during that time.



In addition to conserving water, collecting runoff from your roof stops that water from polluting your local watershed. Typically, rainwater will run off of your roof and end up either in a stream or river. On the journey, the water will pick up pollutants like yard fertilizers, oil and gasoline from street surfaces, animal waste, and more. This polluted stormwater runoff will pollute the local watershed. According to The National Resources Defense Council, urban stormwater runoff rivals factories and sewage plants as a source of dangerous pollutants in local waterways.

“By diverting this storm runoff from your roof into your rain barrel, you’re stopping it from picking up all those pollutants and taking them to your local stream,” says Katie Register of Clean Virginia Waterways, a group that educates people about water stewardship. “You’re significantly contributing to the health of your local watershed.”

### Many Ways to Use Rain

Whether you need to water your plants or wash your windows, you’ll find rainwater ideal for the task. Unlike treated water from your tap, rainwater is free of chlorine and chloramines, chemicals added to water to make it safe for human consumption. Rainwater is also free of salt, which can build up in the roots of your plants when they’re watered with tap water. By supplementing your watering needs with rainwater, you’ll flush salts further down into the soil, making the soil healthier for your plants.

### Just Don’t Drink It

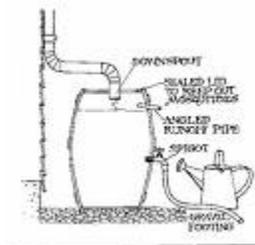
Keep in mind that the water collected in rain barrels is not safe for human consumption. Do not use it for drinking or cooking, and make sure it is clearly marked so that visitors, especially those with children, know that it’s not like a normal garden hose you might find in your yard.

If you think your rainwater may be exposed to heavy air pollution with heavy metals, consider having it tested (call the EPA at 800/426-4791) before using it to water fruits and vegetables. If you have cold winters, store your rain barrel in the winter. Turn it on its side so it doesn’t collect water that will freeze. Taking good care of your rain barrel will keep it in good condition for years to come.

### Make Your Own Rain Barrel

First, you’ll need a strong plastic barrel in which to store the water. Check with local restaurants or food manufacturers to find reusable, food-grade barrels, or look for barrels at your local garden supply store.

Constructing a simple rain barrel should take between 30-60 minutes.



Once you have a barrel, these are the tools you’ll need:

- Power drill with hole bit (1/16 inch smaller than faucet insert) and pilot drill bit. (A 3/4” faucet measures 1” on outside, so you need a 15/16” hole bit)
- Pliers to tighten washers
- Paper towels (for excess caulk)
- Utility knife or small saber saw to cut lid
- Scissors to cut screening
- Hacksaw to shorten downspout
- Screwdriver for hose clamp

Once you’ve gathered your tools, you’ll need to make a trip to your local hardware store to gather your supplies. You’ll need:

- A 3/4” faucet (measures 1” on outside)
- Washers and lock nut for the faucet
- Caulk (clear plumber’s)
- Screening (Buy a roll that is used to repair screen windows. Nylon fabric-like netting is better than the metal type.)
- Hose adapter for your overflow (Many options here, depending on where you want your overflow to go.)
- Washer and lock nut needed for the adapter
- Hosing (short piece) to connect one barrel to another, if you want to have multiple barrels. Hose clamps as needed.
- Bricks or cinder blocks to raise your barrel above the ground (this will improve water pressure).

Now it’s time to put together your barrel! Follow these steps, provided by Clean Virginia Waterways. If you need some extra help, they have photos to accompany each step on their Web site: [www.longwood.edu/CLEANVA/rainbarrels.htm](http://www.longwood.edu/CLEANVA/rainbarrels.htm).

1. Drill a hole near bottom of barrel where your faucet will be.
2. Caulk around outside of hole.
3. Screw faucet in, using a washer.
4. Caulk inside, then put on lock nut with washer and tighten with pliers.
5. Drill a hole near top for overflow, where water will flow out when your barrel is full.

.....Continued on Page 9

## Compact Fluorescent Light Bulbs– A Quality Assessment by Maggie Leslie

Many consumers refuse to buy CFLs because when the bulbs came out they were too big to fit in fixtures, expensive, dim and had poor light quality. Today, consumers may be equally dismayed when they go to the ever growing shelf of CFLs and have no idea how to choose the right one. Choosing wisely is important. Most all of the CFLs are less expensive than they used to be and still use less than one third the amount of electricity. Huge strides have been made in terms of quality and size you can get a CFL equivalent for any “brightness”, BUT, when it comes to quality of light there is a lot to consider.



First things first. How do you assess quality of light? Color temperature is a major factor. The lower the color temperature, the warmer the light. On average, a soft white bulb is about 2700 Kelvin and a daylight bulb is warmer, at about 3400 Kelvin. Lumens, another factor, are the quantity of light emitted by a bulb. This is where a lot of confusion comes in. People are used to thinking of the wattage in terms of brightness, when it is really the lumens that are important. According to Energy Star, an average 75 watt light bulb produces about 1100 Lumens.

A-shaped Incandescent Bulb (Watts)	Typical Lumens (Measure of Light Output)
40	> 450
60	> 800
75	> 1,100
100	> 1,600
150	> 2,600

So when choosing a CFL that says “equivalent to a 75 watt light bulb” make sure you are getting the lumens you would like.

Recently, Popular Mechanics did a study comparing 7 CFL light bulbs in terms of

price, brightness, watts, color temperature and other aesthetic factors. The results were promising, all 7 light bulbs out competed their incandescent counterpart when it came to overall quality of light. The winner was N:Vision Soft White, closely behind was a tie with four of them: Phillips, MaxLite, Westinghouse and Sylvania. For the full survey visit [http://www.popularmechanics.com/home\\_journal/home\\_improvement/](http://www.popularmechanics.com/home_journal/home_improvement/)

Now that the lighting is taken care of, the main disadvantage is that they contain mercury. This is true, each bulb contains approximately 5 milligrams. This means that they must be prop-

erly disposed of, but lets face it, if the average bulb lasts for seven years this isn't a tremendous burden. And to keep it in perspective, this is about 1/5 the amount in your watch battery. Additionally it is a fraction of the amount that is put into the atmosphere by the extra 425 pounds of coal that must be burnt to power the equivalent incandescent.

Currently there is no where in Buncombe County to dispose of the CFLs properly. The County is currently considering an initiative for disposing of the bulbs. If passed citizens will be able to drop the bulbs at their local volunteer fire department.

[www.energystar.gov](http://www.energystar.gov)

[www.celcius.com](http://www.celcius.com)

## Good News From Around the World by Matt Siegel

### Bye Bye (Incandescent) Bulbie

Australia has announced it will ban incandescent light bulbs in three years in an effort to reduce greenhouse gas emissions.



Environment Minister Malcolm Turnbull made the announcement Tuesday, saying replacing incandescent light bulbs with fluorescent bulbs would cut 800,000 tons from Australia's current emissions levels by 2012.

"It'll be illegal to sell a product that doesn't meet [an energy efficiency] standard, so that will happen by 2009 [or] 2010," Turnbull told ABC radio in Australia. "So by that stage, you simply won't be able to buy incandescent light bulbs because they won't meet the energy standard."

The standard incandescent bulb, developed for the mass market more than 125 years ago, consists of a metal filament glowing white-hot and surrounded by an inert gas. They have become a target of advocates for energy efficiency because they lose most of their energy as heat.

Turnbull said the switch to fluorescent bulbs would lower household lighting costs by 66 per cent. Lawmakers in two U.S. states — California and New Jersey — and in the United Kingdom have also proposed bills to ban incandescent bulbs.

### Spain Goes Solar

The recently approved package of minimum construction standards, Spain's Building Technical Code (CTE - Código Técnico de la Edificación), will require all new or renovated buildings to cover 30%-70% of the Domestic Hot Water demand with solar thermal energy.

## Social Committee and Event Updates by Emily Coleman-Wolf

In case you haven't noticed there have been a lot more social gatherings lately. This is definitely going to continue. We are busy planning future events including the Annual Meeting and a short presentation / social event every other month on various topics such as crawl spaces and geothermal heating. So here's my assessment of the past events and some things to keep in mind about future ones.

### March 31, 2007, Member Meeting: Gathering and Home Tour.

Kitty and Ske Boniske were kind enough to open their home to a group of about 20 people from the Western North Carolina Green Building Council. Kitty and Ske welcomed us with Pizza and Salad. We got to have lunch sitting in groups throughout their passive solar greenhouse and earth-bermed living room. They were willing answer any questions about their home including showing us a photo album full of pictures from the start of the house to its completion. After lunch we took a tour of the entire house including its solar panels in the backyard and the solar light tubes in the closets. I had a wonderful time and would like to thank Kitty and Ske for their hospitality.

### Earth Day Weekend, April 21 & 22.

The Western North Carolina Green Building Council had booths at two different events this weekend. The ECO and Blue Ridge Community College Earth Day Event on April 21 and Greenlife's Earth Day Celebration on April 22. During both of these events we gave out literature and information about green building practices. We also sold (at cost) Compact Fluorescent Light Bulbs and Water Conservation Kits. We had some wonderful volunteers man the booth at both of these events. Thank you so much. If any of you want to volunteer at future events please email [emilyacw03@gmail.com](mailto:emilyacw03@gmail.com) or [info@wncgbc.org](mailto:info@wncgbc.org).

### WNCGBC Exhibition, April 26.

This event went so well. Thank you to all of our tabletop exhibitors, volunteers and everybody who helped make this event happen. Also, thanks to Handmade in America for the use of their beautiful space. We had 30 tables with companies ranging from designers to suppliers, to subcontractors. There was great food as well as beer and wine donated by Hart Distributing. What more could you ask for?

### Upcoming Events

**Green Drinks: Every Friday at Bobo's on Lexington**  
([www.ashevillegreendrinks.com](http://www.ashevillegreendrinks.com))

### Green Ideas & Networking Presentations, July, TBA

There will be a presentation on a green building topic every other month beginning in July. This presentation will take about a half an hour and be open to the public. The details are still being worked out so stay tuned and keep checking our calendar. <http://www.wncgbc.org/events/calendar.php>

### Members and Friends Annual Potluck Meeting, June 9th. NC Arboretum, 11:30 – 3:00 or so.

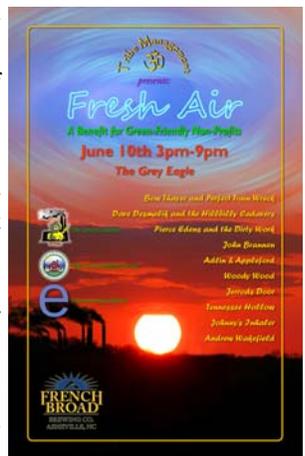
I know that sounds like a long time, but the meeting portion will only be about an hour. First there's lunch (bring a dish), followed by a short presentation on the state of the WNCGBC. This is a great opportunity to find out more about what's going on with our organization. Then there will be the option of a guided tour of the gardens, a presentation about the Arboretum, or just spending time talking with fellow green building supporters at the Arboretum. There will also be a raffle to win two Segway Tours (the winner will be able to schedule the tours for a more convenient time). It will be a lot of fun, bring family and friends!

### On June 10<sup>th</sup> Join Us For Fresh Air: A Benefit Concert For The Environment:

A music event with eight of Asheville's best BANDS and Bow Thayer a nationally recognized recording artist playing in support of the clean air activities of WNC Green Building Council, Canary Coalition and Environmental Defense. Speakers from each non profit as well as guest speakers are part of the program.

Support hard working clean air non-profits taking strong actions for our environment while listening to a variety of music acts in one of Asheville's premiere music clubs. Enjoy the food presented by the great Twin Cousins Cajun restaurant while your there; a great cause with great music and food. Tickets Available Now at:

<http://greyeagle.musictoday.com/GreyEagleTavernandMusicHall/calendar.aspx>



**Case Study– Beili Residence** by Rachel Della Valle and Stephen Beili

Type of Construction: Stick Frame (2x6 Construction)  
 Building Size: 1335sq ft  
 Date of Completion: Oct 2005  
 Major Funding Source: Bank financed  
 Green Certification: HealthyBuilt Home Gold-Level  
 Certified Urban/Suburban/Rural: Urban  
 Builder/Contractor: The EcoBuilders  
 Designer/Architect: Studio Dionisi Inc:  
[www.ashevillemodern.com](http://www.ashevillemodern.com)  
 Renewable Energy Installer: ThermaCraft  
 Site Plan: Studio Dionisi Inc.  
 Owner: Steven Beili  
 Property Name: Hluleka  
 Location: Montford Asheville, NC

**Site & Water Conservation:**

- Composting Toilet Port-a-Potty used during construction
- Cherry/Oak Forest in backyard preserved
- Native Trees Planted (Dogwood especially)
- Cardboard layers instead of plastic under mulch as biodegradable weed prevention
- Energy Star Dishwasher
- Low-Flow plumbing fixtures (Toilets at 1.6gpm and Kitchen Sink at 2.0gpm)



**Energy Use/Renewable Energy:**

- Natural Daylighting throughout, especially in areas that are below grade and would normally require electric lighting during the day.
- Radiant Floor Heating / Ductless Air Conditioning positioned to work properly for the entire house without having to use ductwork which creates potential for mold, dust, and inefficient problems.
- Radiant Floor Heating and Domestic Hot Water run off the same Tankless Hot Water Heater (efficient).
- Efficient Framing (Advanced Framing) that use less materials and increase efficiency.
- Many Compact Fluorescent Light fixtures and bulbs installed
- Energy Star Dishwasher and Refrigerator
- Extensive Air Sealing of house envelope to prevent

- air infiltration
  - Superior Walls-pre-cast concrete basement walls that are well insulated and use less material than standard block walls.
  - Icynene insulation
- Sustainable Materials:**
- Exposed Concrete Floor on the bottom level of home (reducing need for any additional material on top). Concrete counter tops.



- White Pine for staircase provided by a local sawmill
- Salvaged 1950's gas range used for stove
- Birch Veneer Plywood used as some of the flooring
- Max Floor Zero-Formaldehyde Sub-floor
- Pre-Coated Maibec Cedar Shakes with full drainage plane backing to prevent rot
- Local Recycled Steel used for stair brackets and cabinets in kitchen
- Superior Walls
- Locally-made coffee table, owner-made slide shade on window, hand-made ginkgo-leaf resin frosted window for shower,

**Indoor Air Quality & Health:**

- Whole-house water filter
- Natural Daylighting throughout
- Shower Fans on Timers to reduce humidity in house
- Continuous running Fan to bring in Fresh Air as needed.
- Low and No-VOC Finishes on interiors



....Continued on page 8

## Appalachian Offsets Continued...

For instance, if an individual calculates that their lifestyle is responsible for emitting eight tons of carbon into the atmosphere per year due to their energy use, they can pay to eliminate eight tons of emissions somewhere else. Thus, their footprint is “offset”.

There is a lot of discussion on a national and international scale about Carbon Offsets and Renewable Energy Credits (or RECs). The programs all attempt to address climate change through economic actions, but



some are more legitimate than others. First, Appalachian Offsets stresses the importance of people and organizations to attempt to save energy first, not just buy their way out of it. Second, it is important to fund projects that wouldn't have happened without the donation. This is the concept of additionality. Many programs buy offsets from renewable energy systems that already exist, but Appalachian Offsets will pay for new projects only. Third, it is important to take action locally.

The first project will replace incandescent light bulbs with compact fluorescents in the Asheville Housing Authority's low-income rental housing. Using a single 13-watt compact fluorescent bulb instead of a 60-watt incandescent bulb saves over 470 kWh of electricity over its lifetime. A single CFL will save 425 pounds of coal that would release 583 pounds of carbon dioxide and 17 pounds of sulphur dioxide, not to mention a variety of other harmful pollutants. By eventually replacing over 13,000 incandescent bulbs, the Housing Authority and its residents will reduce carbon emissions by more than 3790 tons and sulphur dioxide by more than 100 tons. Participants in this project will be helping clean the air for the region's children and saving money for themselves and the Housing Authority.

Carbon calculations are a great way to learn about how you use energy in your personal life or business and with Appalachian Offsets, you can actually do something about it. Offsetting a ton of carbon costs about \$15, but if an organization gets together, that can reduce the cost per ton and they can make a large impact. Plus, if a business or organization offsets their entire footprint, they can market that they are “Carbon Neutral”. Carbon Offsets are certainly not the answer to climate change or our reliance on fossil fuels, but it is a great educational tool that does make a difference.

Special Thanks to Boone Guyton and Margie Meares! Without them, this program would not have happened.

## Case Study Continued...

### General Site Description:

-House is located within Easy Walking Distance of downtown shops, banks, etc.

-There is a working studio space, shower, and guest bed in the basement.

### Feedback information about the house from Stephen Beili:

#### **R: What is the best reason for building green?**

S: “To live appropriately on the planet.”

#### **R: What was the easiest aspect of building green?**

S: “Choosing low toxic /no toxic finishes and sealers.”

#### **R: What was the hardest part of building green?**

S: “Figuring out the mechanical systems.”

#### **R: What is your best learning story regarding the process?**

S: “Where I lived before, green building was focused on natural materials. I understand now why we're focused on energy efficiency. Watching 'Kilowatt Ours' helped me understand why we're focused on energy efficiency and now I give copies to all of my clients.”

#### **R: What do you love most about your house?**

S: “I love the natural lighting and interior colors in my house, the forest in my backyard, and the infill development aspects of walking downtown. I'll go days without getting in my car.” I love the glamour of my house; I call the work that I do “Ecoglam”.

#### **R: What is the most undesirable part of your house or building?**

S: “I didn't put radiant heat in 2<sup>nd</sup> floor, I would put it up there because radiant heat doesn't rise. I wouldn't paint my exposed 4x8 beams inside and I would paint my 2x8's.”

#### **R: Other comments that would be helpful to people building a green home?**

S: “Hold on to the (green) stuff that's there and put off other (expensive) things to later like cabinets and landscaping.”

“Hire the professionals; engineer, experienced builder, designer...”

“Find out about solar and historic tax incentives. A home in my neighborhood had one third of their renovations paid for.”

## Rain Barrels Cont...

6. Put in a hose adapter for overflow with washers and tighten with pliers.

7. Cut out center of lid.

8. Cut screen larger than lid (the screen will be placed on top of the lid, and will help keep out debris and mosquitoes).

9. Level the dirt under the rain barrel, then add some sand  
10. Rain barrels need to be higher than ground level—use bricks or cinder blocks to give your barrel some height.

11. Measure and cut off part of the downspout.

12. Put the barrel in place, securing the screen over it with the lid, and placing it under the downspout.

13. Connect the overflow from one barrel to the next, or have overflow hose divert excess rain to a garden or distant area of your choice, away from your home's foundation.

*Rain barrel instructions from Clean Virginia Waterways (a program of Longwood University in Farmville, VA). Used with permission. Reprinted with permission from Co-op America, a national nonprofit dedicated to harnessing economic power—the strength of consumers, investors, and business—to create a socially just and environmentally sustainable society.*

To find out more, and receive a copy of the National Green Pages(tm), visit [www.coopamerica.org](http://www.coopamerica.org) or call 1-800-58GREEN.

Local Resources where you can buy rainbarrels: [www.braewater.com](http://www.braewater.com)

## Local News Continued....

### Duke Energy Invests in Energy Efficiency

On May 7th, Duke Energy filed a progressive energy efficiency proposal with the NC utilities commission in which “energy efficiency” becomes the fifth “fuel” in the companies portfolio. “The energy efficiency programs will cost customers approximately ten percent less than the cost of building and operating new power plants,” said Duke Energy Vice President for Energy Efficiency, Ted Schultz. “The plan will compensate Duke Energy Carolinas for verified reductions in energy use and be available to all customer groups.” According to Duke, “Customers would pay for the programs with an energy efficiency ‘rider’ that will be included in their power bill and adjusted annually. The Company plans to “generate” \$1700 in four years through energy efficiency. Duke Plans to invest 1% of sales, or approximately \$35 million annually. As the results from new energy efficiency programs are realized, the com-

pany will retire up to 800 megawatts of older coal plants, significantly reducing emissions. This announcement comes just after the NCUC denied one of the two plants the company requested to build. For more detail on the proposal visit:

[www.duke-energy.com](http://www.duke-energy.com)

### Home Depot Begins Eco Options Labeling Program

In 2004 Home Depot introduced an Eco Options program in Canada and recently began implementing it here in the US. The giant construction product retailer plans to have 6000 products labeled as “eco options” by 2009. Products from light bulbs and insulation to sustainable forestry and clean water will receive the label. Such a program has the ability to impact many consumers buying choices. The signs are already up in the store, though few products are labeled at this point in time. Visit [www.HomeDepot.com](http://www.HomeDepot.com) for more information.

Source: Barabaro, Michael *The New York Times* 4.17.07



## Upcoming Classes

### June 7, 2007 Green Building 101: Renewable Energy

This course will cover renewable energy options including solar, wind and microhydro. Participants will learn about: assessing a site to determine which options have potential; types of system configurations including on and off the grid; design considerations such as siting and orientation; economics and incentives including tax credits, green power and net metering; case studies. There will be a site visit as part of the class. The Instructor is Brent Summerville, Project Manager of the Western North Carolina Renewable Energy Initiative.

### June 20-23 Green Building 101: Designing A Green Home

Over the three days participants will go through the entire process of construction including siting a home to minimize environmental impact, making decisions about structural materials, HVAC equipment, landscaping, finish materials and much more while learning to take into account the financial implications of green building upgrades. The goal of the class is for participants to walk away with the knowledge of how to make educated decisions on benefits and trade-offs of different green building techniques and technologies. Participatory activities while working in groups will be a significant aspect to the class. A local site visit to a green home is also included. Instructor Marcus Renner is owner of Appropriate Building Solutions, Inc. and has taught classes relating to sustainable construction on the university, community college and public level.

**To Register:** <http://www.wncgbc.org/events/calendar.php>

## Special Thanks to Platinum Members of the WNCGBC!



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Alexander Reagan LLC strives to achieve and maintain undisputed leadership as a real estate development company. We develop historic, unique, and innovative projects that create exponential value to the community. As a service provider to the real estate industry, our goal is to produce renewable, sustainable, and economical energy solutions. The Alexander Reagan Mission is to create innovative and environmentally conscious living communities that provide social value, increase building and design efficiency, and optimize shareholder value.

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Appropriate Building Solutions, Inc. is a construction company that offers construction, design and consultation. Each member of our company has charged themselves with the goal of contributing to the health of our planet; building healthy homes that are structurally sound and ecologically friendly. By keeping abreast of current innovations in the sustainable construction movement ABS, Inc. can help you make appropriate decisions about your project. Appropriate Building Solutions, Inc. strives for a sustainable future.

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Padgett & Freeman has been serving Western North Carolina for over 40 years with skill and integrity, finding creative design solutions to complex building programs. With an increased awareness of green building principles and technologies, we can offer the client affordable green solutions while still providing an artistic architecture that is meaningful in its time and place. We can provide Life Cycle Cost Analysis of the building's various systems and infrastructure as they relate to energy and environmental sustainability. With LEED Accredited Professionals on our staff and the staff of our consultants, we are well equipped to facilitate LEED certification if desired. process and the overall quality of the final built product. <http://www.padgettandfreeman.com>



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At the outset of 2007, Cornerstone Renovators & Builders made a commitment to ourselves, the community, & the Green Building Council, to build or renovate every single home we do to the HealthyBuilt Home standards. Our goal is quite frankly to become the premier high-end Green Building home builder in WNC. We plan to also work through the council to educate the general public to the benefits and payoffs of building Green, getting involved on the ground and directly in the community. We expect Green Building & Cornerstone Builders to become synonymous terms to our clients.

<http://www.buildcornerstone.com>



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