



News

SPRING 2013

ALL THE NEWS THAT'S FIT TO BUILD



The Center for EcoTechnology (CET) has been helping the people of Western Massachusetts carry out their daily activities with less environmental impact for the past 35 years. CET provides practical solutions that save energy, materials and money and have a positive impact on our environment and community. CET serves residents, businesses, and communities in the areas of Energy Efficiency and Green Building, Green Homes and Businesses, and through their retail store – EcoBuilding Bargains. From offices in Pittsfield, Northampton and Springfield, the Center for EcoTechnology has become a local, regional and national leader in promoting a sustainable path for the region.

When the first LEED for Homes pilot began in 2005, the Center for EcoTechnology expanded their Green Building services offerings to meet the growing need for third party building certifications, and has been partnering with Wright Builders ever since. CET and Wright Builders have collaborated on over 40 ENERGY STAR projects, including over 20 units at the Village Hill development in

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Northampton, MA, which achieved LEED certifications. These homes use significantly less energy to heat and cool than a house built to the current code minimum standards. CET has provided the energy modeling for Wright Builders's high performance choices. Together, we've been helping Western Massachusetts go green – one high efficiency building at a time.

In 2011, the Center for EcoTechnology also launched its Go Green Initiative to inspire 10,000 green household actions in three years. CET has already helped people take over 4,700 household actions—like replacing an old heating system, insulating their home, starting to compost their food waste or installing a solar system on their roof. The Center for EcoTechnology plans to help people take an additional 4,600 actions to lower their impact in 2013. Please visit www.cetonline.org or like the Center for EcoTechnology on Facebook to request their services, learn about CET's events and steps you can take to go green, and share your green actions.

Last year, CET transformed a Springfield warehouse into the home of **EcoBuilding Bargains**, formerly The Re-Store which sells used and surplus building materials at bargain prices. The building's retrofit cut its energy use in half, and its design features reused materials throughout. Wright Builders has long supported the mission of the store, delivering the first donation to the new building and consistently donating salvaged construction materials. If you have serviceable surplus building materials (not appliances), check with them to make your donation. 413-788-6900, 83 Warwick St, Springfield, MA 01104



Committed to green and sustainable construction for nearly 40 years, Wright Builders continues to promote and practice green construction techniques, and to date has built the only LEED certified community in the state.

Consider targeting Zero Net Energy in your next project – not only is it the right thing to do, it's a great investment AND a great living experience, every day!

Life in a ZNEH is like living in any other efficient modern home, except that it is healthier, more comfortable and less expensive to operate. Here are some of the benefits of Zero Net Energy Home construction (ZNEH):

- **Comfort:** Zero Net Energy Homes provide a high degree of thermal comfort by maintaining stable interior temperature, and eliminating drafts by using mechanically ventilated airtight, high insulation levels, high performance windows and doors, and performance testing throughout the process.
- **Health:** Fresh filtered air is continuously supplied or on a timed cycle, while stale air is expelled through a high performance ventilation system, scavenging the waste heat or cooling, and providing optimum indoor air quality compared to traditional ventilation systems. This is very important for people who suffer from allergies and chemical sensitivities. Living in a ZNEH with a highly effective ventilation system allows both the adults and children to breathe air that is healthier, resulting in fewer missed work or school days due to respiratory issues. Wright Builders does not represent construction techniques as a cure for respiratory and allergy issues, however.
- **Quiet:** A well designed ZNEH is very quiet thanks to thicker walls and better insulated and air-tight windows and doors, providing a more relaxing home environment.
- **Energy Bills:** ZNEHs provide protection against future energy price increases and inflation. Money that you would have spent on heating, cooling, and lighting a conventionally built home can be redirected to financing the higher performing building, your personal well-being, and financial savings plan. Therefore, ZNEHs not only promote energy independence, but also provide for a sense of personal and financial empowerment.
- **Solid Investment:** The market demand and resale value of truly high-performance green homes and Zero Net Energy Homes have yet to be determined because these buyers do not sell their homes. However, early indications suggest an appealing return on investment. First of all, they are very well built, comfortable and healthy to live in. Secondly, as the price of energy goes up potential buyers will place a high value on having a home that has no or much lower energy bills. And thirdly, very high value over the longer term.
- **Affordable:** ZNEHs. Although they cost more per square foot, they cost no more than comparable homes built to code minimum, based upon the total cost of ownership over a 20-30 year period. In a well planned and executed ZNEH, the extra initial costs for design, construction and energy systems can be planned for as part of the overall financing. The resulting increase in the monthly mortgage payments or investment are balanced out by having little or no energy bills. If the added cost is not rolled into the mortgage, the pay back on the extra costs can be as short as 5 to 8 years depending on your energy use, local energy costs, available federal and state tax credits, rebates and incentives, and especially, your living habits. After the payback period, your monthly cost of living will be significantly lower and considerably more affordable for the long term than a conventionally built home.
- **Low Carbon Emissions:** ZNEHs are “legacy” buildings that are healthy for the planet, for your family, and for the generations to come. As one approaches zero-net performance, operating carbon emissions decline toward zero. While the construction process itself is energy intensive, the end result can approach self-sustenance. The excess electricity your ZNEH produces from renewable sources supplies your neighbors' traditionally built homes with energy from a clean renewable source instead of from a carbon producing electric utility.
- **The New Normal:** ZNEHs may look a lot like any other home, are easy to operate and live in, and use readily available building materials that have proven reliability. While ZNEH owners usually make a point of using energy conservatively, life in a ZNEH is like living in any other home, except that it is healthier, more comfortable and less expensive to operate. Look to ZNEHs becoming the new “normal” in home construction in the decades ahead.
- **What it takes:** To build a high efficiency home, or approach zero net Energy, the buyer must have a commitment to the process, be willing to invest in the technology, perhaps be content with less, but better designed space, and must build on a site where renewable resources like wind and photovoltaic are practical.

Staff Features:



LINDA GAUDREAU has been working with Wright Builders for better than 15 years. With her Construction Supervisor License, and 30 years of construction related experience with architects and general contractors, Linda expertly manages our Operations Department; responsible for permitting and project management from the largest of projects to the smallest warranty work. She works closely with our production, field and sales staff; foremen, carpenters, our numerous subcontractors, as well as our customers, municipal offices and 3rd party raters for green building.

With carpentry as a family trade, and the years of experience with Wright Builders, Linda has found time to use her talents to assist Habitat for Humanity. She also enjoys her friends and family, travel, gardening, art, music and nature – including a recent zip line at Berkshire East! You go Linda! We're grateful for your years of commitment to our green building efforts.

Building green and sustainably is not just a trend but a rapidly evolving best choice for construction. There is a lot to read and learn! Here's a good start on a reading list, including suggestions from an architect friend and customer of ours:

What nature can teach us: <http://biomimicry.net/about/biomimicry/case-examples/>

Basic energy concepts: www.nmsea.org/Curriculum/Primer/how_is_energy_transferred.htm

An overview of keeping cool and staying warm: <http://inhabitat.com/green-building-101-energy-atmosphere-part-1/>

Natural ventilation: http://pages.uoregon.edu/esbl/es_site/student_option/explanations_folder/cross_ventilation.htm
http://pages.uoregon.edu/esbl/es_site/student_option/explanations_folder/stack_ventilation.htm

Basic control functions of a wall:

www.buildingscience.com/documents/insights/bsi-001-the-perfect-wall?topic=doctypes/insights

The case for renovation: www.ecotecture.com/your-ecological-house/green-home/build-green-home-retrofit.html

An overview of green building rating systems: www.lisc.org/docs/GDC/Green_Rating_Systems_Primer.pdf

Living Building Challenge: <https://ilbi.org/lbc> Great Books to consider regarding sustainability:

Cradle to Cradle by William McDonough & Michael Braungart: www.mcdonough.com/cradle_to_cradle.htm

Sun, Wind & Light: Architectural Design Strategies by G. Z. Brown, Mark DeKay:

www.wiley.com/WileyCDA/WileyTitle/productCd-0471348775.html

Natural Capitalism, Creating the Next Industrial Revolution, by Amory Lovins and Paul Hawken: www.natcap.org/

NORTHEAST SUSTAINABLE ENERGY ASSOCIATION'S ANNUAL BUILDING ENERGY CONFERENCE:

The Northeast Sustainable Energy Association is a collaboration of building professionals who share the goals for conservation and sustainability. Wright Builders has supported NESEA for many years, Jonathan is a Life Member, and Wright Builders' staff attends the annual conference in Boston each spring.


Just a few weeks ago, both Mark and Jonathan were there, along with Matt, our Associate Estimator, to help present a runner up for this year's award program. Coldham and Hartman Architects, and Kraus Fitch Architects, both widely recognized local firms, had finalist entries this year.

Highlights this year for us included sessions of melding historic preservation and conservation, financing of institutional projects, and many technical developments.

If every new home in America for the next 20 years were Zero Net, the curve of residential usage would drop only 8%, which is large number, but not if one considers context. The huge preponderance of housing in New England is older, performs miserably, and keeps Americans importing foreign heating oil. So the path of Deep Energy Retrofits, (in which Wright Builders has much experience), and all the steps that lead there in terms of incremental improvements, is the real challenge ahead for the next 20 years.


If a customer or friend is interested in attending the conference, it is open to the public, there are student discounts, a free bus for students and passes available for the trade show, which in and of itself is worth a day trip. Building Energy 2014, chaired by local Architect Marc Sternick, is slated for March 4, 5, & 6, 2014.

THUMBS UP



Governor Patrick's "700 projects in 700 days", targeting that number of energy conservation, conversion and retrofit projects on state owned facilities in his last 700 days in office. DCAM is off to the races, with savings in the 10's of Millions annually in energy coming to YOU!

THUMBS DOWN



The ongoing practice of not considering the energy performance of a home in evaluating mortgage qualifications. If known energy savings could be calculated into what a homeowner could afford to borrow, we could help people at the margins of affordability radically improve their homes, comfort, home value, and save tons of carbon and millions of dollars every year.

GREEN BUILDING IN A HILLTOWN

This new home project came to Wright Builders well thought out. Marty and Jane, both mental health professionals from the Boston area, along with Marty's son Sy, expressed a deep desire for a changed and evolving way of life. Jane owned land in the hill towns had aspirations of living on land and producing much of their own food.

Peter Wells, from Berkshire Design in Northampton, developed and refined the site plan and the siting, and Nancy Schwartz, working closely with the builder/client team, further developed and detailed the inspired initial plan from MacLay Architects, who had studied the site and program in depth.

The outcome is a fairly simple but elegant form, with a 10KW PV array from Pioneer Valley Photovoltaics, a floor plan that accommodates the two branches of the family, as well as Marty's drumming, and space for the preparation and aging of meats grown on the farm.

Largely built on a thermal slab, with optimal south exposure and shading angles, 12" cellulose filled walls, cedar exterior, minimal usage of foam and all non-VOC paints, the house is comfortable, gentle, and mindful of its place and the environment, and very well suited to the clients.

For Marty, Jane and Sy, this home is the realization of a 2 year process of creating a homestead farm where they are exploring the problems of and solutions to ecological sustainability. According to Jane, they are very happy in their "functional" and "beautiful" space, serving as both their home of relaxation, a place for guests, and as a working farmhouse. On their property, you will find alpacas, geese, lamb and goats, providing sustenance and keeping the rosa floribunda at bay!

Like our work with so many of our clients, the inspiration and uplifting experience from this relationship helps keep our team strong and upbeat, and helps advance, one step at a time, the quest for a sustainable future in the present, not a far distant, time.



BEFORE



AFTER

LOCAL DEEP ENERGY RETROFIT (DER)

National Grid sponsored this Deep Energy Retrofit of a 1900 two-family home in Northampton, MA, designed and managed by Maple Street Architects, with Wright Builders, Inc. and Mark Landy Design Build. The owners, Peter and Rachel Stevens, are also the architects. As they started renovations, it became clear that most of the systems and finishes needed replacing, which made this two-family a perfect candidate for a Deep Energy Retrofit.

All the layers of existing siding had lived out their lifespan (and the aluminum layer recycles well), so exterior insulation was easy to add. Similarly, the failing roof structure was more expensive to repair than to replace, so its removal allow for new continuous insulation above the framing and below new shingles. The largest challenge for this job was to preserve some of the interior finishes and detail while replacing the entire shell and all systems. The owners helped with the insulating and air sealing, and ran interim blower-door tests. The result is a .64 ACH at 50 Pascal's, nearly Passivhaus standards. What does this mean to the home owner? When the owners worked on completing the interior themselves, the upstairs duplex of 2,000 square foot, was heated all winter with one plug in oil filled radiator!

The super-insulated enclosure, made possible through financial and technical support from National Grid and technical overview by Building Science Corporation, includes full envelope insulation and air sealing, new windows and doors, and new heating equipment for both units. Separate heat recovery ventilators in each unit will lower energy use, improve indoor air quality and eliminate cross-contamination between units.

2012-2013 NEW PROJECTS AND UPDATES

WHAT'S NEW?



Unitarian Universalist Society of Amherst – Wright Builders has been supporting the pre-construction phase of an approximately 5,750 sq ft energy efficient multi-use addition for the Society, which will provide the greatly needed multi-functional space for the congregation, offices, religious education classroom. In addition, there will be a new welcoming entry with full accessibility throughout the building. Designed by Kuhn Riddle Architects of Amherst, with site and landscape design by Berkshire Design Group of Northampton, this new space is expected to be ready for move-in January 2014.



The Hartsbrook School is also awaiting more room! Their 4000 sq ft Early Childhood Building will provide classroom space and is planned for occupancy this fall. Laura Fitch, of Fitch Kraus Architects has designed a cost effective functional space suited to the school's needs.



Atkinson Family Practice – With the close of 2012, Dr. Kate Atkinson moved her offices from the center of Amherst to her new medical facility four months early! Designed by Kuhn Riddle Architects of Amherst, her new “home” provides 13,515 square feet of fresh and airy sustainable, high quality, healthy and bright space that she needed.

The new building includes a photovoltaic solar electric system as a means of producing 60% of the building's energy needs on-site. This benefits the environment and society by reducing the amount of energy that this new building requires from traditional grid sources and the investment is being partially supported by a series of Federal, State, and Local financial incentives.

The open house is scheduled for April 12th, 3:30–7:30, with a ribbon cutting at 5:30. Dr. Atkinson's team, as well as subcontractors and Wright staff knowledgeable in the construction and energy features of the building, will be on hand to answer questions.



The Bement School – Now being enjoyed, this new girl's dorm designed by Margo Jones Architects, is part of a fully constructed two dorm expansion project at Bement, both built by Wright Builders. Engineered and built to reflect latest research in energy efficiency, operating costs are expected to be dramatically reduced, and like the new Blydenburgh and Jiayi Houses, The Bement School feels this new dorm serves as a model for schools eager to contribute to a more sustainable environment.



The Gatehouse at Village Hill, Northampton – To be owned and managed by Opal Real Estate Group, this 16,000 sq ft mixed used facility, currently under construction by Wright Builders (for New Harmony Properties, LLC , a small development company of Jonathan Wright's) has moved quickly from being a bare lot, to a walled and roofed structure, readying for its first tenant, Fazzi Associates of Northampton. Designed by Kuhn Riddle Architects and Berkshire Design Group, the Gatehouse will be the gateway to the continuing developing neighborhoods at Village Hill, including the this fully LEED community built by Wright Builders, Inc. For leasing information on the remaining 3,000 square feet contact Opal Real Estate Group at 413-726-9825.



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WRIGHT BUILDERS' HOMES AND PROPERTIES FOR SALE

Beechwood at Village Hill, Northampton Our newest neighborhood of LEED Registered and Energy Star certified homes at Village Hill Northampton are selling like hotcakes. 3 families recently moved in and are enjoying their Energy Star Tier III and LEED certified homes. Below, are the architectural renderings for our Shelburne Farmhouse and Carpenter's Cottage; the two newest designs for the next three houses. There are lots of options for expansion, allowing you to grow our 3 bedroom plans into 5 bedrooms! Give Pat Goggins at call today at 413-586-7000 x 12.

Emerson Way, Northampton In the newly developing community at Emerson Way off Burts Pit Road in Northampton, Wright Builders offers one remaining woodsy lot. The first is under contract and awaiting its new family. Lot 8 is available and can be made ready for your finishing touches. Offered (with land) at \$499,000 your new home will be Energy Star 3.0 Tier III. Please Call Goggins at 413-586-7000 x 12 for more information.

Sawmill Hills, Leeds This country neighborhood on the northwestern side of Northampton is just minutes from I 91 and downtown Northampton. The two remaining private home sites are tucked into a wooded hilltop on Reservoir Road, abutting the Sawmill Conservation Area with trails right outside your door. Lots 1 and 2 may be purchased as lots only for \$135,000 each or with homes built to Wright Builders' Energy Star 3.0 Tier III construction standards.

