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Putney, VT: the Putney School’s new zero net energy field house. Zero net energy was not only the energy-efficient choice, but also the cost-efficient one. Story starts on page 9.

About NESEA and the Northeast Sun
The Northeast Sustainable Energy Association (NESEA) is the region’s leading organization of professionals working in sustainable energy, whole systems thinking, and clean technology. We advance the adoption of sustainable energy in the built environment through this magazine (distributed to NESEA members), our annual BuildingEnergy conference and trade show, professional workshops, our annual Green Buildings Open House, and more. A Northeast Sun subscription is $55/year, which includes NESEA membership.

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Planning becomes action

As I write this letter, a little more than a year has passed since NESEA’s board of directors approved our 2010 strategic plan. We set several goals in that plan, including:

- Identify like-minded organizations (in some instances, competitors) and collaborate with them to further our respective missions
- Integrate all of our programs more completely and set metrics for each program to gauge how well it is delivering on NESEA’s mission to advance the adoption of sustainable energy practices in the built environment
- Review the role of membership and chapters in meeting our mission

We have done all of these things and more:

- We welcomed dozens of emerging professionals into our community. At least five of them landed jobs as a direct result of their involvement with NESEA, and several joined our BuildingEnergy planning committee, and our community.
- We collaborated with the German Consulate and the Upper Austria Trade Commission to bring BE conference attendees cutting-edge products and information from Europe. This relationship will continue to provide our attendees with information on emerging technologies and practice in the coming years.
- The Boston Society of Architects invited us to deliver a track of seminars at their Build Boston conference in November. It’s a great opportunity for us to get the good work of the NESEA community in front of a broader, more mainstream audience, and for that audience, which is clamoring for more information on sustainability, to sample some very high-quality sessions.
- We discovered a few new ideas that are part of our emerging brand. Like vetting data through what is becoming known as “the NESEA smackdown”—an opportunity for members of our community to give each other unvarnished feedback on the ideas being presented and the conclusions being drawn.
- We achieved new clarity with respect to our programs.

Newfound clarity brings program changes

Regarding that newfound clarity, in some instances, it has spurred us to expand to serve new sectors. For example, we are creating new BE tracks to serve the health care and higher education communities. And we are adding more commercial buildings to our Green Buildings Open House tour to ensure that peer-to-peer conversations aren’t limited to residential customers. In other instances, this clarity has led to the elimination of programs—our K-12 programs, for example (see page 39). Although these programs provided excellent tools and

continued on page 45
Editorial: Building NESEA

By James Petersen

There was a specific day many years ago when I discovered that I was a whole-systems thinker. I was attending a boiler training sponsored by a boiler manufacturer. I had been hoping to learn a thing or two about boilers, but I had also braced myself to be bored. I had quite a different experience.

It was not that I discovered a love of boilers on that day (or since). Rather, I was struck that the boiler manufacturer did not talk about boilers alone. He presented case studies in which he had investigated whole heating systems, made upgrades, and analyzed the energy use improvements. He sparked in me clarity as to the job of a mechanical engineer: to focus on the whole building, not just the mechanical system. A broader understanding of one’s responsibility is necessary if sustainability is to be achieved. Values crystallized, I soon delighted in my discovery of the BuildingEnergy conference and NESEA.

For more than 35 years, NESEA, through BE and other programs, has provided a platform for cross-disciplinary education and for connecting building energy practitioners committed to sustainability. Even in challenging economic times, BE and the Green Buildings Open House have remained strong. NESEA has earned a reputation for delivering quality content toward its mission of advancing sustainable energy practices in the built environment. To advance our mission, we now we must find the best way to leverage the goodwill we’ve accumulated.

I recently had the honor of representing NESEA on a four-day visit to Hamburg, Germany—part of NESEA’s growing international sharing of ideas. Our delegation was treated to an overview of the European Green Capital 2011, its sustainability accomplishments, and its audacious plans for the future. During a conversation with an architect, a structural engineer, and a mechanical engineer, I wondered whether I was meeting only Hamburg’s sustainability champions. The really good Hamburgers (as people from Hamburg call themselves—my kids simply can’t believe it). Was there a mainstream of holdouts? The answer was that building codes had become much more stringent over the last 15 years, essentially forcing practitioners to produce more sustainable processes and results. Also, the cost of energy is high in Germany, which likely encouraged higher standards.

There are differences between Hamburg and the Northeast that make promoting sustainability more challenging here. For now at least, our sustainability champions are a self-selecting bunch. And NESEA needs to reach every individual who is inclined to self-select. Here’s how we do it:

1. NESEA needs to make more practitioners aware of its existence. You can help by getting the word out to coworkers and colleagues. Let them know that NESEA is a welcoming organization, a great way to learn, and a great way to meet new colleagues and collaborators.

2. NESEA needs to maintain high-quality content that practitioners can incorporate immediately. Consider being on the BE planning committee, submitting a presentation, or making your building a part of the Green Buildings Open House. The GBOH is not just about single-family homes anymore, and we will be linking it more closely to BE.

3. NESEA needs to reach more practitioners working in more sectors. BE12 is targeting campuses and health care sectors in addition to single and multifamily buildings. Please do what you can to help link NESEA and underserved sectors.

4. NESEA needs you! NESEA is proud of the influence it has had, but to increase our influence, we need your energy, your talents, and of course your financial support.

Whether you are already involved in NESEA [thank you] or ready to become involved, please do not hesitate to contact me with questions and ideas.

James Petersen
Chair, NESEA Board of Directors
james@petersenengineering.com

James Petersen is a mechanical engineer and the founder of Petersen Engineering (www.petersenengineering.com). All of his firm’s projects reflect his commitment to integrated design with a goal of significantly elevating building performance. For the past five years, James has also been a BE educational session track chair.
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Sustainable design has come to mean many things: LEED, recycled countertops, bicycle racks, energy efficient appliances ... But all that is just the tip of the iceberg. Fueled by the research and practice of countless NESEA members, a deeper understanding of the role of energy in sustainability is spurring the industry to raise the bar to “zero net energy.”

When NESEA unveiled its Zero Net Energy Building Award—with its $10,000 prize—in 2007, none of the entrants met the rigorous requirements. Besides proving zero net energy use via at least a year of performance data, buildings must demonstrate affordability, replicability, reliability, and comfort. The 2010 applicant pool illustrates the strides being made. Each of the five entrants here—a Quaker social hall, two new houses, a residential deep energy retrofit, and a recreational field house—have demonstrated zero net energy in the unique and challenging Northeast climate.

Winner
Camden Friends Social Hall
Camden, DE: A new building adjacent to the 1805 Camden Friends Meetinghouse.

Vision
Revision Architecture’s new social hall at the Camden Friends Meetinghouse was intended to serve the administrative and social needs of the congregation while respecting the refinement and simplicity of the adjacent historic meetinghouse.

Design
The new social hall is sited to take advantage of passive heating, ventilation, and daylighting. With its small, stepping volumes, it takes a backseat to the existing meetinghouse and also invites daylight in. High clerestory windows bring balanced light into the main gathering space. Operable windows catch the prevailing wind for cooling and ventilation. The catering kitchen and other support spaces occupy the northern edge of the building, and the social hall, the south side. Large glazed openings are concentrated on the south elevation to allow for passive solar gain to the social hall. Supplemental heat, when needed, comes from a closed-loop ground-source heat pump powered by a 12 kW PV array.

Exceeding the predicted energy model in energy reduction, the envelope is detailed to minimize thermal bridging in the walls and roof. An aggressive insulation strategy includes a layer of rigid foam over the insulated 2x6 walls that creates a nearly uninterrupted skin around the exterior. Structural insulated panels (SIPs) used at the roof allow for overhangs that shade windows with minimal thermal bridging.

In the building’s first year of operation, the PV array on the south-facing roofs produced almost enough energy to power the entire complex. When left to power only the social hall building, it provides 150 percent of the annual energy usage.
Livermore Residence

Gloucester, MA: An existing 1970s suburban ranch house with extremely poor energy specifications.

Vision
After working in the field of energy efficiency for over 20 years, John Livermore decided it was time to “walk the walk.” His house had extremely poor envelope performance. Single-glazed windows, an extremely leaky building envelope (3,400cfm50), and poorly insulated walls, roof, chimney, and foundation contributed to approximately 9.4 tons of carbon emissions annually.

Understanding the urgency of reducing carbon emissions by 2030, Livermore began a deep energy retrofit (DER) of his home. It was a way to take responsibility for his own family’s carbon footprint, and also to demonstrate how existing houses in our neighborhoods can be improved on a budget of $50,000.

Design
Livermore and energy engineer Marc Rosenbaum modeled the existing house using REM/Rate software. They discussed several scenarios for building envelope and systems, eventually settling on the Larson truss approach to minimize thermal bridging and allow for 5 inches of closed-cell foam (R-30) over the exterior walls. The attic was insulated with cellulose to achieve R-76, plus a radiant barrier to reduce summer heat gain. They wrapped the chimney in Roxul mineral wool to achieve R-10 and insulated the basement walls and slab using rigid insulation. Windows are triple-pane, low-E, argon insulated fiberglass.

Air leakage before the DER was 3,400cfm50, and after, just 500cfm50. A 4.3 kW photovoltaic system produces 186 percent of the home’s electricity needs, and a small Danish woodstove heats the house. The carbon emissions generated by burning wood are offset by the overproduction of the PV system. Electricity demands are reduced with energy-efficient lighting and appliances, programmable exhaust fans, and a three-panel solar hot water system that provides 70 percent of the family’s hot water needs.

Livermore and Rosenbaum reduced the home’s carbon footprint by 100 percent—and did it in a way that is affordable and replicable for the average suburban home owner.

Moomaw Residence

Williamstown, MA: A new 2,200-square-foot residence with a 460-square-foot guesthouse on a 14-acre site comprising woods and fields.

Vision
When the Moomaws hired Bruce Coldham of Coldham and Hartman Architects in Amherst, MA, they brought to the table a vision of a house that would tread lightly on the earth, be highly energy-efficient, and respect the 19th-century agrarian vernacular.

Design
The Moomaws wanted an elegant, livable house that provided live/work space and could accommodate numerous visitors throughout the year. Coldham proposed separating the main living space and the guest space to reduce heating demands. The resulting guesthouse runs at lower temperatures during the winter months when it is not
Putney Field House

Putney, VT: A new 17,500-square-foot field house and central gathering space for students of Putney School, whose campus is a collection of academic buildings on a working 500-acre farm.

Vision
The Putney School came to William Maclay of Maclay Architects with an aggressive vision for sustainability in a new field house that would support the school’s sports programs. The design team responded by modeling five options—a base model, a high-performance model, a microload model, a carbon-neutral building, and a zero net energy model.

Construction costs ranged from $3.5 million for the base model to $5 million for the net zero model, with annual operating costs from $22,500 to $1,200, respectively. Consistent with the sustainability goals of the school, the net-zero option won: the up-front investments in the superinsulated envelope, superior energy systems, and renewable energy would provide a dependable, low-cost operating model.

Design
The field house includes a gym, rock-climbing wall, and ski-waxing room. In the gathering spaces above are locker rooms, flex space used for wellness and conditioning, and bleachers overlooking the gym. Clerestory windows bring balanced daylight to the gym space, and triple-glazed skylight monitors enhance the distribution of daylight. Operable high and low windows allow for cross-ventilation of the gym and support spaces.

Careful installation of the superinsulated building envelope and extensive air sealing led to the low tested air leakage rate of 1,625cfm50. The 17 inches of dense-pack cellulose insulation in a double-stud wall contribute to R-45 above-grade walls and minimize thermal bridging. Triple-glazed windows, R-20 insulation at the foundation walls and slab, and an R-60 roof reduce the heating load.

The design team considered ground-source and air-source mechanical systems. With cost as the determining factor, they selected the air-source heat pump system. An energy-recovery ventilator and variable-volume ventilation systems provide ventilation to the gym. And 100 percent of the energy use is offset by 36.8 kW of solar tracking collectors, installed in a nearby field.

Shepler Residence


Vision
After 10 years in the industry, builder and developer Anthony Aebi went on a family vacation to Switzerland and returned with a desire to eradicate the “throwaway” construction practices commonly seen here. He wanted to find a more durable [centuries, not...
decades), affordable, and efficient alternative. Today, he is committed to zero net energy. Of the seven houses he’s completed at Green Acres, five are occupied and on their way to net zero.

**Design**
The success of the Shepler residence as a zero net energy home comes from its balance of livability, off-the-shelf building techniques and systems, and cost. The well-insulated envelope and tight air sealing reduce the load on the systems. A closed-loop ground-source heat pump provides heating and cooling, and a 10 kW PV array on the roof generates electricity. Even with high-end comfort features, Green Acres’ zero net energy homes are being built at an average of $147/square foot.

Careful attention was given to the envelope to ensure durability and ease of construction, making this house a model for other builders. The walls are insulated concrete form (ICF), achieving an R-21 and exceptional air sealing. The slab is insulated from the ground with two layers of rigid insulation [R-20], and the roof has 14 inches of open-cell foam. Triple-glazed, krypton-filled windows are placed to allow for winter solar gain.

The house was designed for an 8 kW PV system, but David Shepler installed a 10 kW system to provide power for a future plug-in electric vehicle.

Hope Strode is an associate at Maryann Thompson Architects in Cambridge, MA, and a member of NESEA’s board of directors. She was a member of the 2011 Zero Net Energy Building Award advisory committee.
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Green Buildings Open House 2011

This year, a bigger, more diverse, and even more inspiring GBOH

By Sally Pick

On Saturday, October 1, more than 500 green homes and businesses in the Northeast will open their doors to visitors to share what they’ve learned and inspire others to follow their lead. This year’s tour includes more locations that have undergone deep energy retrofits, are built to be net zero energy users, or have achieved LEED standards. You’ll also find more commercial, educational, and multifamily residential properties in the lineup.

Here’s a sneak preview of just three of the inspiring buildings that are moving our communities toward sustainability (see one more on page 26). Go to www.nesea.org/greenbuildings for more information and to plan your own Green Buildings Open House tour.

Quincy, MA

A Deep Energy Retrofit Transforms a 1903 Bungalow

For architect Henry MacLean, principal of Timeless Architecture, designing an expansion and deep energy retrofit (DER) of a Quincy, MA, home was an opportunity to apply his expertise in energy efficiency and renewable energy. There was plenty of room for improvement to the 1903 bungalow, and improve he did: the renovated home is far more comfortable and will use 85 percent less fossil fuel than average. When the owners initiated a renovation to add space for their family of five, they had not planned extensive energy improvements. However, MacLean learned of National Grid’s DER pilot program, which seeks to improve energy use by 50 percent compared to a code-built house, and shared the concepts with them.

The renovated home will use 85 percent less fossil fuel than the average home of its size in the region.

They decided to move forward, says one of the owners, “due in equal parts to the DER financial assistance given, the fact that it was an ideal time since we had new construction underway, and it would make the home efficient for the foreseeable future, attractive as we look toward our later years.”

While tapping National Grid’s maximum DER incentive of $42,000 for homes over 2,500 square feet (this one is 3,560 square feet), the owners are also participating in Affordable Comfort Inc.’s (ACI) North American Thousand Home Challenge, which provides an additional $10,000 if the home demonstrates 70 to 90 percent reductions in energy use through retrofits. For this house, ACI set a threshold of 11,000 kWh per year of total energy use, requiring a year of energy monitoring to validate actual consumption (including gas and electricity for heating, cooling, hot water, and other energy demands).
with credit given for energy generated by photovoltaics and solar hot water). A typical Boston-area home of this size uses roughly 73,000 kWh per year. Assuming that the house meets its annual usage as projected by energy modeling, it will use 85 percent less fossil fuel than the average home of its size in this region.

Building Science Corporation, which, along with the US Department of Energy’s Building America Program, has a technical partnership with National Grid, provided energy consulting. It kept the project on track with the energy efficiency guidelines spelled out by National Grid. Most of the builders and contractors for this project had minimal experience with green building. While training was necessary, says McLean, what was most important was to have builders who were willing to learn and “committed to quality control.”

The project added square footage within the footprint of the original bungalow, expanding 34 percent (50 percent is the limit with this DER program) to include a new second floor, an attic for home office space, and a renovated basement. The second floor was previously a dormitory-style attic bedroom for the children; the renovated house has five bedrooms.

The insulation meets National Grid’s targeted R-values for DERs: roof R-60, above-grade walls R-40, below-grade walls R-20, and basement flooring R-10. By sealing extensive air leaks, the builders achieved an 85 percent reduction in air-exchange rates. A heat recovery ventilator brings fresh air into this tight home while recycling heat from the stale air before it is exhausted. Triple-glazed windows meet the target, with an R-5 value (0.2 U-factor).

A smart boiler, 96 percent efficient, heats the house, tapping the solar hot water system first before calling for gas for both heat and hot water use. The house has two radiant floor heating loops, one in the basement slab and another on the first floor. The rest of the house is heated with a hydro-air system with water preheated by the boiler and circulated through ducts.

Invest in deep energy upgrades— you may qualify for up to 75% back.

National Grid is offering funding and technical guidance to eligible residential customers in Massachusetts and Rhode Island for a Deep Energy Retrofit (DER) as part of a limited time pilot program. Deep Energy Retrofits involve super high levels of insulation and other measures to transform older homes and buildings to perform like new advanced, energy-efficient buildings.

The performance differences reported by participants include:
- total energy savings over 50%
- improved air quality
- improvements in building durability, comfort, health and safety

The maximum incentive for an average-sized single family home is $42,000.

To learn more about National Grid’s Deep Energy Retrofit program, please visit www.powerofaction.com/der.

This is a limited time opportunity. The notice does not constitute a guarantee of savings or an offer to fund work in customer’s homes and may depend upon heating type. You must be able to secure your own financing (up to $50,000 or more for a comprehensive single family project to cover non-energy and non-reimbursable portions of the project), use a contractor or designer with relevant experience in deep retrofit projects, and plan in conjunction with other remodeling projects. Please check with us before incurring costs to plan a project. © 2011 National Grid
In the summer, an air-to-air heat pump cools the space using electricity powered by the PV system, and in the spring and fall, it heats the house on cool days, switching back to the more efficient boiler for higher heating demands.

With full southern exposure on the roof, the 6.25 kW PV system provides a great deal of electricity, offsetting much of the home’s consumption. The PV and solar hot water systems will cover about 50 percent of the energy use, likely allowing the project to meet the Thousand Home Challenge criteria. To make their large PV system affordable, the owners entered into a power purchase agreement with SunRun. SunRun installed and will maintain the solar panels for an up-front cost of $1,000, while guaranteeing the owners a flat electricity rate of 11 cents/kWh for 20 years. Assuming that half of the energy load is electric, the payback will be less than 18 months.

Despite all the home’s bells and whistles, the owners say, “the most remarkable thing is that there is nothing remarkable about our house in everyday use. It’s just consistently comfortable.”

Buffalo, NY
A Model for Sustainable Urban Revitalization

A net zero home in Buffalo’s West Side offers a glimpse of a larger vision coming to fruition within a “green development zone” in this neighborhood—one of the country’s most impoverished. Since 2008, the nonprofit People United for Sustainable Housing (PUSH) has been working with community members to plan the redevelopment of a 25-block area, developing a model for sustainable urban revitalization. Together with the Massachusetts Avenue Project, a nonprofit urban agriculture and youth enterprise organization, PUSH Buffalo is making this green development zone (GDZ) a reality. They are showing what triple-bottom-line urban development looks like, with economic growth, equity, and sustainability interwoven throughout the project. The GDZ features job training in green building techniques for neighborhood youth and unemployed adults, development of affordable green housing, and urban gardening and farming to promote food security.

For their vision and the successes to date of this ongoing project, PUSH Buffalo was one of three winners of Ashoka Changemakers’ global competition Sustainable Urban Housing: Collaborating for Liveable and Inclusive Cities. Among its many accomplishments in the GDZ, PUSH Buffalo has already completed six units of housing with such green features as high insulation, on-demand hot water, and radiant floor heating, and has converted 15 vacant lots into pilot rain and food gardens.

In the summer, an air-to-air heat pump cools the space using electricity powered by the PV system, and in the spring and fall, it heats the house on cool days, switching back to the more efficient boiler for higher heating demands.
is working alongside trainees from the community, subcontractors, and building professionals donating in-kind labor. The Western New York Sustainable Energy Association has already honored PUSH Buffalo for the home’s use of energy-efficient building methods and technologies.

PUSH Buffalo views the retrofitted home as a demonstration project and an opportunity to train disadvantaged youth and out-of-work adults in green building skills. In keeping with this goal, people from the neighborhood built 60 to 70 percent of the home. Project manager Clarke Gocker sees this initiative as “part of an ambitious grassroots community organizing project.”

To attain net zero, significant energy improvements were made to the building, starting with insulation. The builders blew 4 inches of dense-packed cellulose insulation into the balloon frame walls and installed an additional 3 inches of polyiso board over the studs, achieving an R-value of 30. The attic has loose-fill cellulose, providing an R-value of 50. An Energy Star–qualified standing-seam metal roof reflects the sun in the summer, keeping the home cooler on hot days. The appliances also meet Energy Star standards.

A geothermal system with a ground loop buried in the neighboring vacant lot provides the house and basement with radiant-floor heating. Fiberglass batting and a radiant barrier hold the heat in the flooring. Basement walls are insulated with 1-inch expanded polystyrene and fiberglass batting. The rim joists and transitions between both the first and second floor were spray-foamed for insulation and air-sealing purposes.

Once the final touches are in place, PUSH Buffalo will rent the home to income-qualified tenants, likely first recruiting from among their members. They will work with the tenants to develop an energy- and water-use plan. From start to integration into the community’s growing green zone, this home showcases sustainable development in its largest sense, adding an affordable home with minimal utility costs, building the home with work from neighbors who receive training in green jobs, and enhancing the community by developing a model for energy-efficient, sustainably powered housing.

Falmouth, ME
A 1970s Solar Home Gets Updated to Net Zero

Home owners Claudia King and Lindsey Tweed appreciated the 1975 passive solar design of their house in Falmouth, ME. But when the sun went down in the winter, the poorly insulated, poorly air-sealed building did not stay warm. The result was an uncomfortable space with high energy bills. Rather than tear down the dated building, they decided to embark on an

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**Green Building Highlights**

- Attic insulation: loose fill cellulose insulation (R-50)
- Wall insulation: dense-packed cellulose with 3 inches polyiso board over studs (R-30)
- Dual-pane Pella windows (U-factor 0.29)
- Geothermal heating with two zones of radiant floor heat
- Energy Star–qualified reflective standing-seam metal roofing
- 4.65 kW PV
- Evacuated-tube solar hot-water system to preheat water, feeding into tankless water heater
- Energy recovery ventilator
- Winner of Ashoka Changemakers’ global competition, **Sustainable Urban Housing: Collaborating for Liveable and Inclusive Cities**, for Green Development Zone project.
- Honored for net zero home by Western New York Sustainable Energy Association

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**The National Grid DER Program Wants You**

The National Grid deep energy retrofit program is looking for more participants. Most single and many multifamily residential buildings in Massachusetts and Rhode Island are eligible to apply—National Grid wants to showcase a variety of home types and sizes. The Massachusetts program runs through 2012, while Rhode Island’s may end this year. Homes currently in the DER program include a Habitat for Humanity building in Williamstown, MA, and moderate-income veteran housing in Haverhill, MA. For more information, go to www.powerofaction.com/der.
extensive renovation with the goal of achieving zero net energy. Says Richard Lo of Kaplan Thompson Architects, project manager for the retrofit, "The performance of the house was their most important priority; it had to be sustainable as well as beautiful."

Renovating the house instead of tearing it down was of course the sustainable choice, but there were other advantages. The existing footprint of the building, near a pond, was grandfathered, while a new house would have had to comply with current pond setbacks. By leaving the main house in place, the owners were able to keep it close to the pond and open it to water views. They were also able to preserve the post and beam construction and other desirable features. They did move a guesthouse next to the main house, using a portion of the smaller building to replace the garage. The new configuration reduces the combined footprint and improves groundwater flow—water and silt used to pour into the basement after heavy rains.

In addition, many materials removed for the renovation were reused, such as slate tile and interior details. The builders also used off-cuts for interior finishes, such as kitchen counters. For the exterior shingles, boards, and porches, the owners sourced locally harvested cedar.

To get to net zero, King and Tweed are significantly lowering their energy demands with a tightly insulated and air-sealed shell, extremely efficient mechanicals and low-energy LED lights throughout, and large photovoltaic and solar hot-water systems.

The formerly wet, uninsulated basement is now insulated to R-20 using rigid mineral wool insulation outside the existing walls. This type of insulation is impervious to rot and does not absorb moisture, helping to prevent water from entering the basement. Between that and the improved site drainage, the basement is now a conditioned space used for mechanicals.

The builders added two layers of 2-inch polyiso foam insulation to the exterior walls, for a total R-value of 40; they offset the joints of the boards both vertically and horizontally for added tightness. The outside polyiso board is manufactured with an attached layer of oriented strand board, which acts as a nail base for the cladding. Preserving the exposed post and beam construction, builders installed polyiso board under the exterior of the roof and dense-packed the cathedral ceiling with cellulose insulation, for a total R-value of 60.

All windows are Serious brand fiberglass windows, which perform better than double-glazed windows. Plastic film is suspended within the
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glass layers, which allows for three gas cavities. While not technically triple-glazed windows, they offer R-values of 5.9 and 9.1, depending on the window type—as good or better than heavier triple-glazed products.

Because of the post and beam construction, installing air-to-air heat pumps involved some creative thinking. The solution devised is a mini-split heat pump system with one air-to-air heat exchanger outside and five handling units inside to distribute heat throughout the house. There is a woodstove for supplemental heat.

Most of the 7 kWs of photovoltaic panels will sit on the roof of a new tower, which houses mechanical space at the bottom and an office/spare bedroom above. To accommodate PV in several locations on the roof with varied sun exposure, each module is connected to its own microinverter for maximum efficiency (with a single inverter, the output is reduced if there is shading on any of the interconnected modules). King and Tweed have left the large and easily accessible garage roof available for the possible installation of PV to power an electric car.

King and Tweed have also planned a sustainable landscape, which will be installed when the interior finish work and exterior are completed. The land will feature locally grown, native species, a new bio-swale for filtering and controlling storm water runoff, and restored natural groundwater patterns.

This retrofit is providing the builders with an important learning experience that they will apply to future jobs. Dan Kolbert of Kolbert Construction noted that, while they had experience with energy-efficient building, it was their first time taking an existing house...
Embracing the Triple Bottom Line

On campus and in the classroom, Babson College moves sustainability to its core

By Dallase Scott

Babson College, a business school located in Wellesley, MA, is transforming itself into a leader in sustainable operations and the teaching of sustainable business practices. A suburban location creates certain constraints and challenges as the college pursues improvements to campus infrastructure and operations. But Babson’s greatest opportunity to advance the cause of sustainability lies in its core mission: educating future business leaders. Babson has brought the triple bottom line—people, profit, planet—into the core of its teaching.

This article takes a look at Babson’s progress and examines four key factors in the college’s success: strong leadership, strategic facilitation, thoughtful planning, and a willingness to act and experiment.

Leadership

In October 2008, just three months into his tenure as president of Babson, Leonard Schlesinger established a new direction for the college by signing the American College and University Presidents Climate Commitment, which committed the college to charting a course to climate neutrality. In May of 2009, the college further demonstrated its commitment to sustainability with the release of Babson Strategy Version 2.1, which emphasizes the integration of sustainable practices and principles into an entrepreneurial education.

Babson took another step in April of 2010, demonstrating its entrepreneurial approach to sustainability by engaging GreenerU Inc. to establish and run a “sustainability office.” GreenerU provides sustainability expertise through holistic campus engagement and energy projects, financing assistance, and mechanical and equipment installations.

To better understand its strengths and weaknesses vis-à-vis sustainability, Babson also became a charter member of the American Association of Sustainability in Higher Education’s (AASHE) Sustainability Tracking and Rating System (STARS). The college completed the STARS process in January 2011, receiving a STARS Silver rating. The score is serving as a guideline for the new Sustainability Office as it works to increase cross-campus collaboration.

Facilitation

Much of the Sustainability Office team’s work has centered on improving campus infrastructure while engaging the people who work, learn, and live in it every day. The team works closely with Babson stakeholders to find optimal solutions for improving the buildings and grounds while reducing deferred maintenance. With the college’s Facilities Management Group, it is identifying and implementing improvements geared to reining in energy and water use. It is also collaborating with students, faculty, and staff to craft fun and engaging programs aimed at changing energy, water, and waste behaviors.

The office has also become a one-stop shop for sustainability communication and organizing on campus. The program manager—trained in facilitation, conflict resolution, and behavior change—works with the many
certain campus organizations interested in sustainability, mentors student groups, and facilitates a group of Babson employees (Babson Eco Leaders) interested in greening their workplace and increasing awareness of the college's commitment to sustainability.

Student engagement is a priority. The office has improved coordination among student environmental groups, especially between the graduate and undergraduate populations. The Babson Eco Reps program runs a 12-hour workshop series that trains students to become effective agents of environmental change. These representatives learn how to educate their peers on environmental issues and encourage them to live in a more eco-friendly way. The goal is to institutionalize sustainability. To that end, the Eco Reps designed a sustainability class for the First Year Seminar (FYS) curriculum that will help new Babson students understand how their behaviors can make a positive impact on campus and in the world. The class was approved by the first-year dean and becomes an official part of the FYS curriculum this fall.

Planning

Before it established the Sustainability Office, GreenerU conducted an energy audit of the entire campus to identify efficiency opportunities. This audit formed much of the core of Babson’s Sustainability and Climate Action Plan. This thoughtful, achievable plan sequences the work of improving energy efficiency over several years.

The plan’s objectives in the area of commuting and car travel are necessarily modest. Babson will continue to investigate opportunities for reducing greenhouse gas emissions from commuting, but the focus will be on the development of a videoconferencing infrastructure that will reduce the need for travel. Less modest is the objective—bucking the trend of continual growth in the built environment—to actually shrink the campus over time via smart planning and more efficient space use. This goal is now being explored in much greater depth and detail in an ongoing master planning process.

Action

Thoughtful planning is valuable only if backed up by action. Babson prides itself on its reputation as a leader in teaching entrepreneurship, and its focus on entrepreneurial thought and action informs all major initiatives, as emphasized by the college motto, “Action trumps everything.” Babson has demonstrated a willingness to act and experiment even as plans are being formed, and then to redirect its actions to align with its plans once they are in place.

The college’s approach to energy and water efficiency mixes conventional energy efficiency measures such as fluorescent lighting upgrades, variable frequency drives, and high-efficiency boilers with more innovative approaches, including the following:

- Occupancy-based control of HVAC systems. Babson has taken a step beyond conventional scheduling of HVAC equipment via the building automation system to include...
occupancy sensor control of spaces used intermittently, such as classrooms and conference rooms. This significantly reduces fan energy and the energy required to heat and cool ventilation air by better matching use of the HVAC systems to use of the space.

- **Heat and water recovery from ice at ice rink.** Like many skating rinks, Babson’s used to dump the ice shavings in a pile outside the rink after each resurfacing. Now, an ice recovery pit uses heat from the ice-making chiller’s condenser loop to melt the ice—thus cooling the condenser water and reducing cooling tower energy. The melted ice is then used for cooling tower make-up water, further reducing cooling tower energy and water use.

- **LED lighting.** Babson has been experimenting with LED lighting for several years and is far ahead of most colleges in implementing this technology. Babson has used LED lighting in classrooms, conference rooms, and outdoors.

  GreenerU has been working with Babson to bring process innovation to the delivery of energy efficiency. An example of this is the Babson Executive Conference Center (BECC) project. During the 2010 implementation of a major energy efficiency upgrade to the building, occupants—both managers and hourly workers—took part in a workshop that informed them about the efficiency projects happening in their building and about how they as individuals could create pro-environment change in the workplace. This process yielded constructive ideas from occupants on additional energy efficiency opportunities, as well as feedback on aspects of the new building control sequences that were out of sync with the use of the building. As a result, control sequences were modified. This collaborative process created greater user buy-in to the changes, which in turn should help deliver energy savings from the project.

  Babson’s Facilities Management Group has been very willing to innovate, especially with regard to energy efficiency. The college, after all, produces many entrepreneurs who go on to create businesses in the green technology arena. They engaged ThinkLite, a lighting services company started by current Babson undergraduates, to upgrade campus parking deck lighting. ThinkLite identified an opportunity to retrofit 100-watt metal halide fixtures with induction lighting technology. This approach reduced lighting wattage dramatically, provided greater control of the lighting, and reduced maintenance costs—all for significantly less than it would have cost to replace the fixtures with new induction or LED fixtures.

Babson’s Sustainability Fair introduced the college’s new Sustainability Office, showcasing the sustainable options and successes of students and local businesses in a fun carnival atmosphere.
Babson has also engaged with companies that grew out of academic work at Babson. One such company is Skynja, a consumer-demand response company working to reduce electric demand by automating the shifting of computer charging and other time-flexible activities to off-peak times. Another is Down to Earth Waste Solutions. Founded and run by a recent Babson graduate, this early-stage waste recycling and vermicomposting company was recently used as the waste vendor at the popular Babson Energy and Environmental Conference.

This constant drive to improve campus operations has resulted in a more than 13 percent decrease in energy consumption since 2005. Babson is targeting another 14 percent decrease by 2015, through efficiency and behavior-change initiatives.

In many ways it would be easier to invest in smart buildings that turn off all our lights for us, separate our trash and our recyclables, and conserve water without our having to think about it. However, to make the practice of sustainability sustainable, it is imperative to engage the occupants of those buildings. This is especially true when the occupants are business students who are developing habits that will follow them into their lives and careers.

In a short time, Babson has made great strides in establishing itself as a true leader in sustainability. As Babson deepens its focus on sustainability, it is not only reducing waste and emissions from campus operations, but also producing future business leaders with a much stronger emphasis on people, planet, and profit.

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Dallase Scott is leading GreenerU’s delivery of sustainability services at Babson College, where she serves as sustainability coordinator. She has a diverse background in psychology and urban/environmental planning. Previously, she developed and taught a Tufts University course designed to foster effective environmental activism. As a Peace Corps volunteer, she spent two years in the Caribbean teaching environmental education classes with a focus on behavioral change.
How Did We Do? Monitoring House Performance

An innovative Massachusetts house is built for living and, more important, learning

By Allison Page and Ruth von Goeler

It is an exciting time for green designers and builders—one of invention and innovation. The industry knows more than ever about how to build high-performance, energy-efficient buildings. Yet we need to know more: The higher the performance goals, the more thoroughly we need to understand and integrate interdependent approaches and systems.

So while applying whole systems thinking is an exciting process, it can be confusing and challenging for project developers. Much is changing in the way buildings are built, and there is debate about how best to meet project goals. One thing for certain is that green building innovation constantly provides opportunities for learning through observation, feedback, and adjustment.

This reality is what motivated David Rosenmiller of Riverstone Development to set up robust systems for monitoring the innovative features in a new Williamsburg, MA, house that pushes the envelope on many aspects of green building. It is the first of five to six houses planned for the sustainable neighborhood Riverstone is developing at Two Pond Farm. This first house—which Rosenmiller’s family lives in—had to not only meet high-energy and health-performance standards, but also create a doable path for developing future homes. In addition, Riverstone wanted to show that a high-performance home did not have to sacrifice anything in terms of market appeal factors, such as aesthetics, comfort, and usability.

Energy goals and design

The bottom-line energy goal was to create a home whose consumption would be 80 percent below standard for a new house, and that would be comfortable year-round without burning fossil fuels for heating or cooling. Although the usual square footage of a superefficient home would not accommodate all the functional goals—adaptable to single-floor living, space for a future in-law unit, a guest room, and work, studio, and playroom spaces—Sarah Susanka’s “not so big” scale would. Could this three-floor, 3,300-square-foot home be kept comfortable year-round without a central heating system?

Riverstone brought in architect Mary Kraus of Kraus Fitch Architects to design the house, and South Mountain Company energy engineer Marc Rosenbaum, PE, to conduct energy modeling. Initial modeling showed that if Riverstone built the envelope...
carefully, they could create a house on the desired scale at less than 19,000 Btu per hour peak heating load. That would be low enough to dispense with a central heating and cooling system and rely instead on two small point-source heaters.

Recommendations included these proven strategies:

- Build an airtight infiltration barrier to Passive House standards
- Create a high R-value envelope with minimal thermal bridging
- Provide energy recovery ventilation
- Install solar thermal collectors for DHW and a solar electric array sized to cover the roof and most of the estimated loads
- Heat using a minimum of locally sourced, renewable biomass fuel
- Install seasonally adjustable awnings on south-facing windows to eliminate most of the cooling load and site so western windows are shaded by a grove of trees

In addition, a number of more experimental strategies were undertaken to see if performance could be enhanced, including:

- Use multiple, aesthetically pleasing strategies to integrate thermal mass into the living space, including two innovative ones: over 1,000 “upcycled” water-filled plastic jugs, hung from floor joists and placed on trusses above a slatted ceiling, and a water-filled glass block interior window wall
- Build internal, closeable vents between rooms to maintain thermal comfort throughout with passive air flow
- Provide active heat recirculation using the ventilation ductwork as a backup if needed
- Install exhaust-only summer ventilation for major heat-producing appliances

- Bury a pair of ground-loop pipes around the foundation, connected to a fan coil heat exchanger in the incoming fresh-air duct, to precondition air entering the ERV

By incorporating these recommendations, it was anticipated that the heating load might be met by the equivalent of less than one cord of wood, and the need for cooling eliminated.

**Testing and Monitoring**

As design proceeded, it became clear that there was not necessarily a way to definitively predict the effectiveness of some of the building strategies.

While modeling approximated performance, some key aspects of it could not be addressed with the level of confidence needed. The best way to get some answers seemed to be to build prototypes of some of the innovative components and establish a monitoring scheme. The process of building and occupying the house generated further questions that called for data gathering.

Mike Duclos of DEAP Energy Group has been helpful to Riverstone in designing a monitoring protocol. David Rosenmiller, having a personal interest in improving the operation of this particular house and a business interest in applying its lessons to other homes, is actively involved in the monitoring process. Detailed logs are being kept of all unusual situations and of the various experiments being run. The monitoring plan takes advantage of the fact that the whole house is wired to an Ethernet network (to avoid EMFs, wireless equipment was not used in the house). Most loggers are connected to the network so that data can be viewed graphically in real time, archived on a central computer, and easily downloaded for analysis.

At this point, the house and monitoring system are very new. But here are the questions we’re working on answering in six areas, and preliminary results and analyses so far:

**1. Passive air circulation**

*Questions:* Will passive air circulation suffice in a house of this size, on three floors, given a sufficiently robust envelope and no central heating system? Will there be sufficient warm-air circulation to provide thermal comfort in exterior rooms when doors need to be closed? Will this comfort be sufficient for the ill, elderly, or infants? How effectively do small point-source heaters, some passive solar gain, and a

The glass wall is filled with water in a novel attempt to add thermal mass.
system of passive vents and transoms provide even thermal comfort in a house this size?

To answer these questions, a limited set of Onset Hobo loggers have been deployed to measure temperature and RH throughout the house. In various scenarios, loggers will be moved from one location to another and different sensor inputs applied based on the season. For instance, loggers will be installed in rooms with heat sources or solar gain, and in cold north-side ones to test for distribution in the winter.

Early data show that under non-optimal operation, winter overnight bedroom and bathroom temperatures were maintained at or above 65 degrees [F] by keeping the doors open. Keeping a door open would not necessarily work for everyone or in every situation. Vents in the door transoms and a matching low louvered opening beside the doors are being enhanced by widening the louver spacing to increase passive air flow in hopes of maintaining temperatures in these rooms when privacy is needed. In case monitoring shows that to be insufficient, a warm-air recirculation fan within the ventilation system will also be tested to see if it efficiently balances comfort.

Other winter results show that while the pellet stove maintained adequate temperatures throughout the house during nighttime operation, it was not able to raise them in the morning, and it tended to overheat the room it was in. As a result of early monitoring, a deflector will be added to the pellet stove to direct heated air toward a vent between floors.

Louvers between rooms aid passive air circulation.  
A peek behind the ceiling slats.

THERMAL MASS IN CEILING STRUCTURE: CROSS SECTION

Over one thousand "upcycled" gallon jugs were re-purposed to hold water as thermal mass within the ceiling structure. Warm air moves through slatted wooden ceiling panels attached to structural web trusses. The weight of the thermal mass and panels is distributed between the top and bottom chords of the trusses.

The thermal mass absorbs heat from the air when the rooms below are warm, and releases the heat when the rooms are cool, reducing temperature fluctuations for a more comfortable indoor environment throughout the year.
2. Thermal mass

**Question:** After installing a good thermal envelope and achieving Passive House–level air infiltration rates, would a fourfold increase in thermal mass in fact reduce the annual heating load an additional 60 percent, as modeled?

Modeling illustrated how effective thermal mass would be in reaching project goals: assuming a supertight, superinsulated envelope, increasing the mass from a standard 7,500 Btu/F to nearly 30,000 Btu/F would reduce the annual heating load by 60 percent. It is a challenge to separate the impact of added thermal mass from that of the normal thermal mass of the house. Additional detailed modeling will likely be needed. Monitoring will focus on the most significant thermal mass: the 1,000-plus water-filled plastic jugs hidden above the slatted ceiling. Using Hobo loggers, the temperature of jugs both near a sunny window and on a more shady side of the house will be tracked to examine how temperatures change over daily cycles relative to those of room air. From this data, calculations will estimate the total Btu’s absorbed and released and how efficiently this thermal mass is regulating room air temperatures.

3. Ground loop pump

**Questions:** Will a newly minted fan coil heat exchanger (designed and built by Conservation Technologies) connected to glycol-filled ground loop pipes be successful in preconditioning air entering the ERV? Will it improve comfort in summer by reducing the incoming fresh-air temperature and humidity, and in winter by raising the temperature of air going into the ERV, sufficiently that subsequent ventilation air feels comfortable? Can it help eliminate the need for preheating air into the ERV at low ambient temperatures and improve the efficiency of the ventilation system?

Sensors connected to an Onset U30 data logger will monitor the temperature of the end of the ground loop pipe, as well as capture the outside air temperature and RH of the outside ventilation air intake, and of the air inside the duct after it leaves the fan coil but before entering the ERV. By showing the differential in these temperatures and RHs, we hope to learn whether this atypical precooling/dehumidification and preheating strategy is effective.

4. Electricity use

**Questions:** Which appliances and equipment are using the most electricity, and how can settings and use be adjusted to minimize demand?

Household electricity use is difficult to accurately project, because occupants’ behavior is hard to predict. Even with detailed research on every new appliance (which in this case are significantly better than Energy Star standards), it is not until occupancy that electricity use can be fully analyzed through monitoring and optimized to reduce the load.

Once total household use, PV production, and net purchase/sale of electricity to the grid are isolated, it will be easier to determine whether a target 80 percent reduction has been met. With early data suggesting that it has not, key circuits and appliances will be monitored for use via a Powerhouse Dynamics eMonitor, which will provide a tremendous amount of data about how much individual appliances and equipment are drawing and about changes needed to reduce this load. Real-time viewing of circuit-by-circuit electrical use provides an additional opportunity for reducing electrical load by potentially changing occupant behavior.

5. Solar production

**Question:** How well do the PV panels and solar thermal collectors meet the electrical and domestic hot water loads?

An Ethernet-connected SMA Webbox monitors the PV production, a Resol DL2 monitor captures data from the solar hot water system, and an Onset Silicon Pyranometer measures solar radiation. The data these systems are eliciting will clarify respective solar PV and solar thermal system performance. This technology allowed remote monitoring of an inverter to see whether it was functioning as intended.

6. Indoor air quality

**Question:** Given the supertight shell, how much will the ERV have to run to maintain appropriate CO₂ and humidity levels?
Key Green Design Goals

- Target energy consumption—reduction of 80% below standard new home
- Healthy built environment—no toxic materials and low EMFs
- Local and sustainably sourced materials
- Beautiful and durable
- Supports working at home
- Adaptable to aging in place and an in-law apartment

Details

Envelope:
- R-42 walls
- R-66 roof
- R-25 under slab
- Air sealing (caulk, tape, foam)
- Blower-door test plus resealing prior to wall close-in
- R-5.3 triple-glazed, insulated fiberglass windows
- R-5 triple-glazed doors
- 0.61 SHGC = on all south-side glazing
- Awning on south windows for summer
- West windows are shaded by trees

HVAC systems:
- No central heating system
- Point-source heaters = 1 pellet stove and 1 woodstove
- ERV plus ground loop pipes and a heat exchanger to prewarm/precool air
- Warm-air recirculation fan in ventilation system
- Major appliance heat exhaust fan (for summer use)

Solar:
- Passive solar gain: Over 50% of windows on south; glazing = 12% of floor area
- 6.4 kW PV system
- Solar domestic hot water (with electric backup)

Thermal mass:
- Over 1,000 “upcycled” water-filled plastic gallon jugs hidden above a wooden slat ceiling
- Dyed-concrete slab
- Window wall of water-filled glass blocks
- Extra-thick plaster walls to help regulate both temperature and humidity

Results
Blower-door test (final) = 342 cfm@50 pascals
HERS rating = 22
Energy Star = Certified
LEED target = Platinum

GBOH
This house and the sustainable neighborhood of Two Pond Farm will be on NESEA’s October 1 Green Buildings Open House tour. Owner/developer David Rosenmiller will be on hand to answer questions. Go to www.NESEA.org/greenbuildings to learn more.

A portable CO₂ monitor and Onset Hobo temp/RH data loggers will continue to be used to track CO₂ and RH levels in key rooms. Visual displays on monitors allow occupants to learn how much and when the ERV needs to run. Early indications are that optimal ERV operation—to maintain CO₂ levels below 1,000 ppm in closed, occupied rooms and the kitchen, without using excess electricity—is up to half of the time.

Stay tuned

How will the house as lived in perform compared with the house as designed and modeled? Rosenmiller and his family moved into the house in October 2010, but it is still a work in progress. Over the winter, heating required one-third cord of wood and less than a ton of pellets, equivalent to about 22 MBtu’s. The actual heat use was 70 percent less than the 75 MBtu’s of the base case building from the modeling. While this was slightly more fuel than predicted, it was not adjusted for a colder-than-average winter and a colder actual location than the model accounted for. Moreover, the specified exterior doors and the fan coil heat exchanger had not yet been installed.

Some performance issues have already been identified and are being corrected—repairs made, equipment settings adjusted, and the family’s behavior modified. All of which leaves Riverstone confident that the target reduction of 80 percent will be met.

As the house runs through the seasons and results trickle in, further adjustments will be made to optimize its performance. More important, Riverstone will glean new knowledge that will benefit future Two Pond Farm houses and the greater building community.

Allison Page is a green building project wrangler based in Montague, MA. Ruth von Goeler is a sustainable living and building consultant based in Northampton, MA. Both consult with Riverstone Development.
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An Accidental Introduction to Whole Systems Thinking

Conversations from around the WSiA campfire

BuildingEnergy’s Whole Systems in Action track is different. Every year, each of the BE conference tracks is co-created by a group of volunteer topic experts. Typically, a group comes together for the several months it takes to design and manage a track and then dissolves. Not so for Whole Systems in Action (WSiA). In 2004, the WSiA collaborative came together and stayed together. They have built an outpost beyond the physical and calendar boundaries of BE, growing into a community of practice where NESEA members with larger-scale questions can go to muse.

At NESEA’s Basecamp account, the WSiA collaborative has an ongoing digital campfire that they’ve been gathering around for years to share and consider ideas. After the June meeting of the BE12 planning committee in New Haven, CT, Jamie Wolf, a founding collaborative member, started the thread excerpted here. It’s a fascinating discussion of the ideas that matter, between old friends and new voices who care deeply about each other and the world we make. It’s also a case study of how groups learn.

Rather inadvertently, the discussion yielded a primer on whole systems thinking, one that I thought was worth capturing. Sipping from the fire hose, I have scooped from the thread only the references and resources related to this vital topic. Much more of the thread is posted at the NESEA blog. —Mitch Anthony

From: Jamie Wolf  
Date: Thu, 2 Jun, at 7:41pm

I’m back from today’s BE12 planning meeting with some provocations ... Are we focusing this track on the questions that are the most significant and meaningful to the community we are engaged to serve? Or are we pursuing our own parochial interests?

Mitch Anthony/Thu, 2 Jun, at 8:55pm

When Paul Eldrenkamp presented some of his ideas about the BE12 workshops, they felt VITAL. Specifically I was struck by his suggestion that we revisit Donella

Meadows’s “Leverage Points: Places to Intervene in a System.” He (Paul) made a really compelling yet simple case that these thoughts/ideas have the power to influence virtually everything we do in life, from how we design buildings to how we design our daily activities.

Jamie Wolf/Fri, 3 Jun, at 7:36am

I’m looking at Amelia’s recent invitation to more fully explore Gregory Bateson too. An introduction to the thinking and guidance of these and other leaders in systems thinking might be a useful point of entry.

John Abrams/Fri, 3 Jun, at 7:48am

I think one area we should be looking to is “building the new economy” (expanding on the very successful Chris Martenson session last year). Every single person at BE is going to be affected by the success, or lack of success, of efforts to march toward an economy built for people. Much of our economic policy is based on gross national product, which gives us tremendously faulty messages.

There is interesting work being done with the genuine progress indicator (GPI) and living wealth indicators by The New Economy Working Group. Their website says that their agenda is to

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My brother, Jon Foley, does similar work. He’s an earth-systems scientist and directs the Institute on the Environment at the University of Minnesota. He’s actively working to figure out how to feed 9 billion people without trashing the planet. He’s also looking at how and which kinds of biofuels do or don’t make sense. He’s working on large renewable-energy systems (mainly wind) in the Upper Midwest, better cookstoves in developing countries, better mapping of freshwater resources, and a host of other projects.

In all this work, he’s guided by the kind of whole systems thinking we’re championing.

Dana’s [Donella’s nickname] “Leverage Points” essay really resonates with many people, but I’m not sure all of them grasp its practical implications. She is teaching us how to be more effective. Tweaking parameters is puny, reorienting goals is profound. Buffers add resilience but will be overwhelmed by unchecked exponential growth (reinforcing feedback loops). It’s not an essay, it’s an instruction manual.

We can USE this stuff. Jamie mentions the fellow from MIT at BuildingEnergy 2004. That was John Sterman, head of the Systems Dynamics Group at MIT’s Sloan School. We were both students of Dana’s, and we’ve remained dear friends. He puts “big-picture, systems thinking” into practical action every day. He has shown hundreds of companies why their personnel procedures aren’t working, why R&D projects always seem to run over schedule, why deferred maintenance is both hardwired into company policy and killing company performance, why suppressing forest fires leads to worse forest fires, and on and on. He has had a significant influence on recent climate-change debate, including being the guy who originated the whole “carbon bathtub” analogy you’ve likely heard of.

“Advance the transition from growth in GDP as the measure and goal of economic activity to improvements in human, social, and environmental health as the proper measure and goal.” This may be a direction to explore which would advance whole systems thinking and have broad appeal at BE.

David Foley/Fri, 3 Jun, at 10:37am
To paraphrase Bateson, how do we make the track “a difference that makes a difference”?

Dana’s [Donella’s nickname] “Leverage Points” essay really resonates with many people, but I’m not sure all of them grasp its practical implications. She is teaching us how to be more effective. Tweaking parameters is puny, reorienting goals is profound. Buffers add resilience but will be overwhelmed by unchecked exponential growth (reinforcing feedback loops). It’s not an essay, it’s an instruction manual.

We can USE this stuff. Jamie mentions the fellow from MIT at BuildingEnergy 2004. That was John Sterman, head of the Systems Dynamics Group at MIT’s Sloan School. We were both students of Dana’s, and we’ve remained dear friends. He puts “big-picture, systems thinking” into practical action every day. He has shown hundreds of companies why their personnel procedures aren’t working, why R&D projects always seem to run over schedule, why deferred maintenance is both hardwired into company policy and killing company performance, why suppressing forest fires leads to worse forest fires, and on and on. He has had a significant influence on recent climate-change debate, including being the guy who originated the whole “carbon bathtub” analogy you’ve likely heard of.
I caught most of a session that may be a great fit for WSiA. It was called Visioning Resilient New England: the Economic Future. The two participants were Terry Mollner of the Trusteeship Institute and John Cavanagh of the Institute for Policy Studies. Terry is founder, chair, and executive director of Trusteeship Institute Inc. (www.trusteeship.org), a think tank and consulting firm founded in 1973 based on the economic theories of Mahatma Gandhi. It focuses on the development of socially responsible businesses and Gandhi's theory of "trusteeship."

John Cavanagh is the coauthor of 10 books and numerous articles on the global economy, including Development Redefined: How the Market Met Its Match (2008, Paradigm Publishers), written with Robin Broad. The Institute for Policy Studies (www.ips-dc.org/) strengthens social movements with independent research, visionary thinking, and links to the grassroots, scholars, and elected officials. They "empower people to build healthy and democratic societies in communities, the U.S., and the world."

Their session was about the new economy—where it needs to lead and how we can take it there. Terry is all passion and engagement (he’s a wonderful guy who’s been at this stuff a long time), and John has a deep well of knowledge to share. Said Jerelyn, "I think Terry & John would be a great team to follow up on Chris M & David O at NESEA—very dynamic session, and an excellent combo."

The other session I loved was a presentation by two people from a company called Carbon Harvest Energy. I went because Alex told me beforehand that “in 30 years of studying sustainability systems part by Alex and Jerelyn Wilson. If you ask me, it is VITAL to update some of our mental models and to keep them updated. There’s a lot going on here, and asking the questions of which ones and how are full of passion and compassion. These are not technical questions; they are ADAPTIVE questions. Peter Block’s book The Right Use of Power touches on some of the issues here.

Tyler Volk would be able to speak along with Jon on 2 possible themes: “Limits to the earth,” which he has been developing with his students to envision how the world’s projected 10 billion can live at Japanese/European standards (equal or better quality of life than Americans, with less energy use). Tyler is also working on a more comprehensive book on metapatterns, which David mentioned in his post.

Tyler’s friend Tyler Volk uses similar thinking to better understand the biogeochemical cycles of the planet, with implications for sustainability. He also searches for the “metapatterns” we can use as a kind of Rosetta Stone to decipher complex systems: borders, sheets, tubes, spheres, arrows, and similar. Interesting academically perhaps, but incredibly cool when we start putting these ideas to practical use.

Although I doubt he’d say so, Joe Lstiburek is guided by whole systems thinking. It enables him to understand complex systems and have profound practical impacts. To have a flow, we need a driving force and a path. We need a source and sink. Flow is from hot to cold, wet to dry. Flow will happen if the barrier is not continuous. From that, we can understand ice dams, mold contamination, energy waste, mechanical system failure—all the practical stuff, informed by the big picture stuff. No schism. Whole. Systems. in Action.
The work of the New Alchemists in the real world. They are building their first plant currently in Brattleboro VT and have contracts in Lebanon NH, Keene NH, and Sullivan County.

Amelia Amon/Wed, 8 Jun, at 2:04pm

I liked both of John Abrams’s ideas, particularly on methane (speaking of cows). I recently saw a presentation on the Specht Harpmann Zerohouse: www.zerohouse.net. They claim to have an off-the-shelf household anaerobic digester for energy production. Interesting, if not potentially explosive.

Amelia Amon/Thu, 23 Jun, at 12:09pm

I just read From Bauhaus to Ecohouse, by Peder Anker. Anker documents the Bauhaus designers’ interest in science, particularly biology/ecology, & how it influenced their humanist approach to living with nature. He implies that things went wrong when Buckminster Fuller, the Whole Earth Review, New Alchemy, & Biosphere 2 took up “cabin ecology” [controlled ecosystems] or “spaceship earth” concepts, taking eco-design out of the realm of mainstream architecture. He’s continued on page 46.
Facilitating Wind Energy Siting:
A List of Dos and Don’ts

By Lawrence E. Susskind and Patrick Field

The Consensus Building Institute (CBI) and Raab Associates, Ltd., with support from the US Department of Energy, brought together more than 100 wind developers, state regulators, environmentalists, local officials, and technical experts to share ideas about how to site wind energy facilities.

The “Facilitating Wind Energy Siting” workshop, held at Harvard Law School, Cambridge, MA, in March 2011, enabled advocates, opponents, and experts to engage in three days of constructive discussion about the “right way” and the “wrong way” to go about siting wind energy facilities. Recognizing that it can be extremely difficult to win approval to build even a single wind turbine in an unpopulated area, the workshop surfaced a practical list of “dos and don’ts”:

Here’s what not to do:

• Don’t tout the national or global benefits of wind energy when people care about how decisions affect them locally. Greenhouse gas reductions and increased independence from foreign oil sound good in the abstract, but they don’t offset adverse local effects.

• Don’t surprise people and announce plans to build something without giving everyone in the area a chance to say whether and how a project should be built. It’s better to have several siting choices ready to go, rather than just one.

• Don’t build wind turbines too close to the nearest abutters. Adequate buffers make for good neighbors.

• Don’t tell people that wind farms will be so quiet they won’t hear anything. Human perception of noise is a complex and idiosyncratic phenomenon.

• Don’t be afraid to talk about the ways in which the profits from a wind energy facility might be shared with the community. Joint ventures are easier to negotiate than hostile takeovers, and some of the public may see land development for energy as the latter.

• Don’t presume that 100 percent of the people in an area will accept a proposed wind energy facility just because it meets all federal, state, and local guidelines. Some people don’t like change of any kind, regardless of the benefits that might be created. Some might view themselves as particularly adversely affected (a vista disrupted, nighttime sleep disturbed, etc.).

• Don’t assume the media will necessarily cover the “whole” story and present all viewpoints. A few angry, upset, media-savvy citizens on a mission can dominate the narrative and drown out a large majority of the silent public.

Here are some things to do:

• Do find a way to involve all the relevant stakeholders in discussions about when, where, and how to build and operate wind plants. Consider using a skilled, neutral facilitator without an agenda to manage these conversations.

• Do consider contingent agreements, for instance, consider an insurance policy to compensate those who live near a proposed facility for any measurable decline in property values caused by the wind development. It is possible to buy “property value insurance” to ensure that no one suffers any losses.

• Do realize that everyone reacts differently to noise and visual impacts. That doesn’t mean they are wrong or crazy. It does mean they have different opinions, views, and experiences.

• Do engage in joint fact finding so that all sides have a chance to frame the questions that they want to have answered. Let them help select experts they trust to provide good technical advice. Avoid the “dueling experts syndrome,” which will be great for well-paid consultants, but won’t necessarily produce credible, trusted information.

• Do realize that hundreds of wind farms have been built across America (and in other parts of the world) and that past experience can be instructive, both in the positive and the negative. One small, failed development can affect the public’s view across an entire region.

• Do realize that there are risks and benefits associated with any technology, and that the job of elected and appointed officials is to reduce risk and ensure that benefits are shared, not to gloss over the negative impacts and assert that there are no risks.

• Do encourage states to involve the public in formulating state wind policies. Battles over specific sites and projects do not add up to general
policies about where, when, and how to encourage the construction of wind energy plants. Pre-approval of certain kinds of sites, setback and noise requirements, aesthetic and environmental protection rules, community benefit agreements, and monitoring provisions can help to avoid the need to address each of these questions over and over again at every site.

In our view, the traditional “town meeting” or “hearings” approach to energy facility siting rarely leads to informed agreement. Stakeholders learn little at raucous public meetings other than who is mad, to what degree, and at whom. Local media are often not willing or able to interpret and disseminate critical background information that would allow people to make informed decisions.

To encourage reasoned debate and non-partisan information sharing, communities—citizens, town officials, elected officials, agencies—need to engage in carefully managed problem solving. Professionally facilitated stakeholder engagement, involving professional intermediaries chosen by the stakeholders, ensures an even playing field where such informal problem solving is possible. Robust public engagement should take advantage of all the communication tools of the modern age (the web, Facebook, Twitter, YouTube etc.).

We feel that the “Facility Siting Credo” summarizes the best way to ensure a fair, efficient, and wise outcome in wind energy siting. The Credo, prepared by the MIT-Harvard Public Disputes Program, has been carefully tested in hundreds of siting disputes. “New Models for Consensus Building and Acceleration of Large-Scale Energy Infrastructure Projects,” co-authored with Jonathan Raab of Raab Associates, describes in greater detail how to apply six principles for using consensus building when siting large-scale energy infrastructure.

Wind siting is certainly hard to do—but it’s no harder to do right, than it is to do it wrong.

This article first appeared on the website of the Consensus Building Institute (cbuilding.org/).

Lawrence Susskind founded the Consensus Building Institute, where he is chief knowledge officer. A faculty member at MIT for 35 years, he is the Ford Professor of Urban and Environmental Planning and directs the graduate program in Environmental Policy and Planning.

Patrick Field is managing director of the Consensus Building Institute and associate director of the MIT-Harvard Public Disputes Program. He has helped thousands of stakeholders reach agreement on natural-resource, land-use, water, and air issues.
Good-bye, K-12

Moving forward, NESEA leaves K-12 behind

In April, the NESEA Board of Directors decided to eliminate our K-12 education programs. Although this was a difficult decision, we are confident that it will ultimately make NESEA stronger.

join NESEA. We could not persuade educators and our community of practitioners—architects, builders, engineers, contractors, policymakers, investors, and others—to network with each other, to share ideas and information, in order to advance sustainability in the built environment.

In addition, we discovered that much of the work our K-12 department did is being done elsewhere. Most of the states within NESEA’s territory followed our early lead in teacher training and launched statewide energy-efficiency education programs.

Increasingly, we believe, this landscape will be adequately covered.

None of this is to say that our K-12 programs were anything but excellent. Classroom teachers and nonformal educators have long given our curricular units and our educator workshops rave reviews. We can be proud of the curricula we developed, and of the excellent manner in which our staff and partners delivered it over the years.

— Jennifer Marrapese, executive director

Staying on mission

As many of you know, NESEA’s mission is to advance the adoption of sustainable energy practices in the built environment. We do this by connecting professionals to each other, to ideas, and to consumers. For many years, there had been confusion about how NESEA’s K-12 programs fit within this mission. Certainly, these energy-efficiency and renewable-energy programs educated professionals—teachers—and connected them to each other and to new ideas. Yet despite our best efforts, we never effectively integrated these programs, or their attendees, into the rest of what NESEA does. We could not get educators to

Our curriculum lives on

We are committed to continuing to make NESEA’s K-12 resources widely available:

- All NESEA K-12 curricular units and lessons available for free download at EnergyTeachers.org.
- Hitchcock Center for the Environment (www.hitchcockcenter.org), in Amherst, MA, has taken possession of all Energy Thinking for Massachusetts and Solar Sense workshop materials.
- Clean Energy for a Clean Environment program materials and the “Clean Green Power” and “Wind Wisdom” patches are available through the Girl Scouts of Central and Western Massachusetts (www.gscwm.org).
- The Junior Solar Sprint program will continue to be facilitated at the local and state levels. The National Renewable Energy Lab (www.nrel.gov) has a listing of all state and area JSS coordinators and also hosts JSS curriculum materials online.
- X-Prize Fuel Our Future Now will house our original Cars of Tomorrow curricular unit at its website (fuelourfuturenow.com).
- Wind Wisdom for School Power … Naturally curricular units are available for free download at SchoolPowerNaturally.org.
A thank-you to our sponsors

Many, many thanks to our K-12 program sponsors. In recent years, they have included the following:

- Western Massachusetts Electric Company, for our Clean Energy for a Clean Environment program
- New York State Energy Research and Development Authority (NYSERDA), for our program New York Solar Sails: Expansion of Solar and Wind Energy Education for School Power … Naturally
- The US Army Educational Outreach Program (AEOP), for our Junior Solar Sprint program and Northeast Regional Championship
- Solar Wave, for our BuildingEnergy Educators’ Summit
- The Lydia B. Stokes Foundation, for our K-12 marketing efforts
- Pitsco Education, for providing JSS education kits to teachers at JSS teacher workshops
- Edmund Scientific, Fuel Cell Store, Kid Wind, and Solar Made for donating prizes for the JSS Championship

Thank you, Arianna and Susan

We extend our heartfelt thanks to Education Director Arianna Grindrod and Science Educator Susan Reyes for their dedication and hard work. Over the last several years, they did a wonderful job of raising NESEA’s profile within the K-12 community. We will miss them and hope to collaborate with them again. We hope you enjoy this photographic tribute to them and their fine work.
Fostering Sustainable Behavior: An Introduction to Community-Based Social Marketing

Doug McKenzie-Mohr, PhD
New Society Publishers, 2011

By Robert Leaver

This useful and provocative how-to book presents a hands-on curriculum for changing human behavior. While directed at helping people behave more sustainably by reducing their home energy use, it is well worth the time of whole systems/sustainability professionals working at a larger scale. There is gold here for us to extract. Just as NESEA has building science as the foundation, this book has "people science," or sound social psychological research, underneath it. And it effectively uses personal stories—stories do change us.

Getting people to do something new

McKenzie-Mohr, an environmental psychologist, begins by revealing his failure to reduce his own energy use. His behavior fails to change, he says, because two common change practices don’t do the job alone: 1) telling people the facts and why it is important to reduce energy use, for example because we have to lower carbon emissions; and 2) citing economic self-interest. He already knew that reducing energy use was important and that he would save money if he did it. As he makes clear, you need more than facts and cost savings to get people to regularly do something new. You need facts and clear economic self-interest and an integrated practice for changing behavior. McKenzie-Mohr walks us through what this means for people who live in a house. His framework for individual behavior change is community-based marketing. Here’s what works, he says:

- Begin by selecting the specific behaviors you want to change
- Identify the end state of the desired behavior, e.g., install and use a programmable thermostat, not just buy it
- Determine what behavior changes will have the greatest impact
- Identify the specific barriers to and benefits of changing behavior, based on research in the community
- Avoid assumptions and generalizations (in the US, the data say ...)
- Always stay local with your needs assessment and data

McKenzie-Mohr offers a number of practices to include in an integrated community-based social marketing program. Establishing norms, he says, creates a ripple effect in a community. For example, if a household does not put recycling bins on the curb along-side their garbage, the town doesn’t pick up their garbage [a standard many communities now use]. Also, we will start doing something differently when we see it done that way by someone we trust and respect. And to keep doing the new behavior, we need consistent visual prompts or reinforcements that “pierce the heart” and stay there.

The book is chock-full of tools for changing behavior. Take simple commitment techniques: You create momentum for change by starting with small things, small requests. People actually make a change. Once they are
in motion, it is easier to up the ante and tackle bigger changes.

**How does it all apply to us?**

I am left with several questions. As noted earlier, *Fostering Sustainable Behavior* is written for the average person living in a house, not for builders, architects, engineers, and so on. Community-based social marketing requires mounting a campaign to motivate individual residents to learn how to change behavior. How do we as whole systems professionals change our behaviors? Who among us would organize such campaigns among residents? Among professionals? (I found no clear answer in the book as to who mounts one for residents.)

The author is Canadian. Canadians tend to be more community-minded than Americans. Can these methods work in the United States? Can this framework and toolbox be applied at the scale where NESEA professionals have begun to work, beyond residences (but not abandoning them) to large educational institutions and hospitals? Can they be used to get large-scale developers to build things more sustainably? With planners to effect zoning and code changes? With politicians to effect public policy changes?

To work with whole systems, NESEA must ask and answer the above questions. Let’s begin asking and answering these questions together. We could form a community of practice—read the book together and figure out how to apply it to our work. Our task: to craft behavioral change practices for large institutions, developers, planners, and politicians. We would build a toolbox for whole systems behavior change. Who’s game? E-mail me at rleaver@newcommons.com.

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Community psychologist Robert Leaver works on large-scale, whole systems change in the next economy, and on community building and network shaping. He is the convener, in Pawtucket, RI, of New Commons: Think ... Link ... Do, which guided the development of a 50-year vision plan for the island of Martha’s Vineyard, MA. He is also the conference chair for BE12 and a member, for the past five years, of the Whole Systems in Action Collaborative, which creates BE’s Whole Systems track.

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The Solar Advocate
Larry Waitz
LDW Publishing, 2009

By Joel Gordes

Every once in a great while, a book appears that can be both educational and amusing, maybe even essential. The Solar Advocate, an introductory guide to solar power, fits that description. It may even border on whimsical. Not since The Solar Cat Book, written by Jim Augustyn in 1979, have I seen solar technology explained in such clear, everyday language that even the least technically adept among us can grasp what might otherwise be some pretty formidable information.

Augustyn used cats to demonstrate all the basic principles of solar energy. Liking their fur to heat traps, he described their natural inclination to lie in the sun to absorb its rays, and then to lie with their owner to “transfur” the stored heat. While Waitz does not depend on the cuteness of our furry friends to get the basic concepts across, his information-laden, 67-chapter book is suitable for anybody from age eight on up (although I may be underestimating what today’s precocious youngsters can grasp).

Those who are in architecture and other fields that support sustainable development but who do not have technical expertise in renewable energy will learn enough lingo to sound relatively competent among their engineering brethren/sistren—some of whom can be quite condescending to mere mortals. This book is the great equalizer. I would even go so far as to suggest that policy makers, who can determine where we spend billions of dollars on energy, take advantage of it. Speaking from experience, it would not take much to intimidate the oppositions with what this book contains.

In addition to the table of contents, there is a set of subdivisions called “66 Characteristics of Solar Energy,” each of which has a two-page explanation not just of the characteristic, but also of details such as “types of solar thermal systems.” This adds to the book’s value while maintaining its simplicity. The book is also well illustrated. Diagrams, drawings, photographs, tables, and charts cover everything from pertinent astronomy basics to how many
square miles of photovoltaics it would take to power up the whole country. [Answer: just 100. Try out that little fact at your next neighborhood party.] Again, its charm is that it imparts this sometimes complex information without evoking any of the anxiety that the science-adverse among us might normally experience. You almost don’t realize you’re being educated.

When I got the book, my approach was to read one “characteristic” and one techie fact on the facing page each day and ponder them for a few minutes. I suggest that other readers do the same. This makes the book easily digestible if you have very little time but a desire or need to know more about the subject.

The author has set up a website (www.thesolaradvocate.com) that provides a snapshot of what is in the book. While not interactive at this point, the site could become so. It could also offer updates on technology advances and cost reductions, as well as offer whole new topics without immediately going to a second or third printing.

One such topic that I would like to see: an easy-to-understand explanation of the Renewable Portfolio Standard (RPS), which is in effect in most NESEA states, and of the Renewable Energy Certificates (RECs) that are required to meet those standards. Even at a recent NESEA planning meeting, the majority of people thought one member was for some reason speaking about “wrecks” until it was explained that RECs were commodities sold as a by-product of the generation of kilowatt-hours from renewable energy sources. RECs might become important for funding some future systems on zero net energy buildings.

So there is a lot more for The Solar Advocate to do in demystifying such arcane but essential knowledge, even for our professional community.

Joel Gordes has been involved in energy efficiency and renewable energy for more than 35 years. He has worked with active systems and passive homes, as well as issues related to energy policy and security. He also serves on the Northeast Sun editorial board.
Turning Goals into Reality
from page 5

curriculum to teachers, we were never able to effectively integrate them, or their attendees, into the rest of what NESEA does. Overall, we’ve received incredibly positive feedback with respect to all of these initiatives. It has been an enormously gratifying year.

Having made all this progress, we can afford the luxury of thinking about how else we can connect professionals to ideas and to each other. A few of the things we’re exploring:

• How to take BE on the road so that it’s more than just a three-day event in Boston. This may include webinars and in-person learning opportunities.

• Using social media not to market and promote NESEA’s activities, but to connect members of our community to each other.

• Transitioning the Northeast Sun into a peer-reviewed journal to ensure that all ideas presented in this forum have been reviewed, and in some instances challenged, by at least one recognized industry expert.

We hear you: the website sucks
The one consistent piece of negative feedback I have received over the past year has been about the NESEA website. Specific concerns vary, but the message is clear: from your perspective, the website sucks. I am thrilled to report that we are now in a position to address this. Armed with new clarity about who our members are and what we can do to help support them, we have many ideas about how to improve the site. Among them:

• Create an online forum in which members of our community can share best practices—what works and what doesn’t

• Create a more valuable and robust resource library

• Redesign the Sustainable Green Pages to give users better information about the listed practitioners and their credentials

• Celebrate and make more visible the important work that our members, sponsors, and other partners are doing to advance sustainable energy practices

Of course, we want and need your feedback. How do you envision using a website to connect with other NESEA members? What information would you like to be able to access? How can we improve the NESEA website? We will be convening focus groups among our various stakeholders—members, exhibitors, sponsors, conference attendees, and others—to learn more about their needs. Please e-mail me with your thoughts on these questions, or if you’d like to be included in a focus group, at jmarrapese@nesea.org. Alternatively, join the conversation by “liking” NESEA on our Facebook page, or connecting with us on LinkedIn.

— Jennifer J. Marrapese, executive director

Green Buildings Open House 2011
from page 21

to net zero. In the process, he says, “We figured things out that we’ll be using in the next five to ten years.”

Green Building Highlights

• Wall insulation: 2 layers of 2-inch polyiso rigid foam board placed on exterior walls, with joints offset vertically and horizontally, and cavity of wood framing dense-packed with cellulose (R-40)

• Roof insulation: 2 layers of 2-inch polyiso rigid foam board above roof sheathing and dense-packed cellulose within cathedral ceiling framing (R-60)

• Serious brand fiberglass windows (R-5.9 to R-9.1)

• High-performance Drewexim doors with R-values up to 5.8

• Conergy 7.05 kW PV array

• Fujitsu Halcyon Hybrid Flex mini-split air-to-air heat pump

• Lifebreath heat recovery ventilator

• Designed to meet ACI’s Thousand Home Challenge

Sally Pick’s consulting firm, SJP Environmental Consulting, LLC, offers a range of services for green building and environmental nonprofits, businesses, and associations, including writing, managing projects and collaborations, and directing community-based public education and outreach initiatives. Sally is a NESEA member and local organizer for NESEA’s Green Buildings Open House tour. Her western Massachusetts home, built in 1856, will be on the tour again this year with new energy improvements.
An Accidental Introduction to Whole Systems Thinking  
from page 35  
a young guy, so has a different perspective than many NESEAites who, well, were there. It might be interesting to have him debate, because I think what really disturbs him about that period was the trumping of science over aesthetics.

To get a feel for his position, Google the article “Buckminster Fuller as Captain of Spaceship Earth.”

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**Get Involved!**

Join the NESEA chapter near you

**Boston Area Solar Energy Association (BASEA)**  
Henry K. Vandermark  
Tel: 617-242-2150  
hkv@solarwave.com  
www.basea.org

**Cape and Islands Renewable Energy Collaborative (CIREnew)**  
Liz Argo  
Tel: 774-722-1812  
argoconsulting1@gmail.com  
www.cirenue.org

**GreenHome NYC**  
Steven Lenard  
Tel: 917-846-2374  
slenard@GreennHomeNYC.org  
www.greennhome.org

**NESEA New Jersey**  
Beth Robinson  
nsea.nj@gmail.com

**Springfield Area Sustainable Energy Association - MA**  
Mike Kocsmiersky  
Tel: 413-883-3144  
mikek@spiritssolar.net  
www.nescape.org

**Sustainable Delaware**  
John Mateyko AIA  
Tel: 302-645-2657  
charitocw@aol.com

**University of Mass Lowell Solar Energy Association**  
John J. Duffy  
Tel: 978-934-2968  
john_duffy@uml.edu  
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**NESEA Affiliates:**  
Building For Social Responsibility (BSR) – VT  
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SUSTAINABLE GREEN PAGES 11
ENERGY PROFESSIONALS IN THE NORTHEAST
2011 DIRECTORY
The Sustainable Green Pages has two parts:
1) a listing of 52 green energy businesses by specialty and state, followed, on page 56, by
2) an alphabetical listing of all companies listed in the directory. If you already know the name of the company you want to find, go directly to the alphabetical listing for contact information.
Alternatively, for example, to locate a solar panel installer in New Jersey whose name you do not know, look up the list of company names under the specialty “Photovoltaics.” They will be organized by state. You can then get more information about the individual companies in the alphabetical listing.

This information is also available at www.NESEA.org, where information is updated daily.

### Alternative Technologies
- Public Service of New Hampshire
- Canada
  - Matrix Energy, Inc.
- CT
  - Philippe Campus Architect, LLC
  - Schneider Electric Energy Solutions
- MA
  - Ameresco
  - Bone Builders
  - Boston Green Building
  - Eco+Plan Architecture, LLC
  - Energia
  - Energy & Sustainability Partners
  - Engineered Solutions, Inc.
  - Fortress Green Building Supply
  - Kasten & Company, Inc.
  - Massachusetts Clean Energy Center
  - New England Solar & Green Solutions
  - New England Sustainable Homes, Inc.
  - Nexamp, Inc.
  - Precision Decisions, LLC
  - RJ Franey Mechanical Services, Inc.
  - Spire Solar Systems
  - SunBug Solar
  - Sustainable Energy Analytics
  - Sustainable Retrosfits
- ME
  - SolarTechnic Contractors, Inc.
- MN
  - The Energy Conservatory
- NH
  - Green Woodlands
  - GreenSource Energy Solutions, LLC
  - NC Electronics, Inc.
  - Unitil
- NJ
  - Electrical Power Solutions, Inc.
  - Noveda Technologies
- NY
  - Harmony Builders, LLC
  - M.J. Chojnicki Architect, PC
  - New York State Energy Research and Development Authority (NYSERDA)
  - Solar Plumbing Design
  - SunEnergy Americas
- PA
  - Blue Moon Enterprises
  - Nova Power Group, LLC
- RI
  - Alteris Renewables
  - Northeast Solar & Wind Power, LLC
  - Slater Technology Fund
- VT
  - BuildingGreen, LLC
  - Stead Consulting
  - William Maclay Architects
  - Planners
- MA
  - Ameresco
  - Caluwê Inc.—Hydro-to-Heat-Converter
  - Vanasse Hangen Brustlin, Inc.
- ME
  - FutureMetrics
- NH
  - Optimal Energy Solutions, LLC
- VT
  - HB Energy Solutions
  - Home Comfort Warehouse

### Building Design/Construction
- BPC Green Builders, LLC
- Consulting Engineering Services
  - Donald Watson, FAIA
  - New Tapestry, LLC
  - Partners For Architecture
  - Partners for Architecture
  - Philippe Campus Architect, LLC
  - Picton Brothers LLC
  - Sellars Lathrop Architects, LLC
  - Tai Soo Kim Partners
  - The United Illuminating Company & CT Energy Efficiency Fund
  - Trillium Architects
  - Wolfworks, Inc.
- MA
  - Ai3 Architects, LLC
  - Arrowstreet, Inc.
  - Austin Design, Inc.
  - Azimuth Construction, Inc.
  - Bay State Design, Inc.
  - Bone Builders
  - Bonview Corporation
  - Boston Green Building
  - Bourke Builders
  - Brown Lindquist Fenuccio & Raber Architects, Inc.
  - Bygimmeister, Inc.
  - Cape Painting & Carpentry, Inc.
  - Capizzi Home Improvement
  - CBI Consulting, Inc.
  - Coldham & Hartman Architects
  - David Whitney Architect
  - Dietz & Company Architects, Inc.
  - Dietz & Company Architects, Inc.
  - Eco+Plan Architecture, LLC
  - Energia
  - Engineered Solutions, Inc.
  - ERS-Energy Resource Solutions
  - Evöl Design
  - Finegold Alexander & Associates
- VT
  - BuildingGreen, LLC
  - Stead Consulting
  - William Maclay Architects
  - Planners
- ME
  - O’dara Architects, Inc.
  - Olga Kahn
  - Panich + Noel Architects
  - Paul Huijing, Inc. Construction and Engineering
  - Polanik Architects
  - Royer Architects
  - Sage Builders, LLP
  - Salmon Falls Ecological Design
  - Saltonstall Architects, Inc.
  - Sasaki Associates
  - Seaside Solar Design/Builders
  - Southern New England Solar-Technologies LLC
- NH
  - Structures By Design, Inc.
  - The Valle Group, Inc.
  - Timeless Architecture
  - Transformations, Inc.
  - Treehouse Design, Inc.
  - Turn Key Builders, Inc.
  - Van Natta Co., LLC
  - ZeroEnergy Design
- VT
  - BuildingGreen, LLC
  - Stead Consulting
  - William Maclay Architects
  - Planners
- MA
  - Alteris Renewables
  - Northeast Solar & Wind Power, LLC
  - Slater Technology Fund
- VT
  - BuildingGreen, LLC
  - Stead Consulting
  - William Maclay Architects
  - Planners
- ME
  - O’dara Architects, Inc.
  - Olga Kahn
  - Panich + Noel Architects
  - Paul Huijing, Inc. Construction and Engineering
  - Polanik Architects
  - Royer Architects
  - Sage Builders, LLP
  - Salmon Falls Ecological Design
  - Saltonstall Architects, Inc.
  - Sasaki Associates
  - Seaside Solar Design/Builders
  - Southern New England Solar-Technologies LLC
- NH
  - Structures By Design, Inc.
  - The Valle Group, Inc.
  - Timeless Architecture
  - Transformations, Inc.
  - Treehouse Design, Inc.
  - Turn Key Builders, Inc.
  - Van Natta Co., LLC
  - ZeroEnergy Design
R.L. Benton - Builder
 Ridgeway Construction
 Walker Design & Building
 Zetland Homes, LLC

NJ
 Spector Associates Architects
 Torcon Energy Services

NY
 Anthony J. Musso, Architect
 Blue Sea Development Company
 CEMBRA
 Harmony Builders, LLC
 In Site: Architecture
 Ingersoll Painting & Construction, Inc.
 Phinney Design Group
 Solar & Wind FX, Inc.
 Start to Finish Design and Remodeling
 Stephen Tilly, Architect

OH
 Ferut Architects

PA
 Bakker & Lewis Architects
 Dimensional Architecture PC
 Energy Opportunities, Inc.
 Re:Vision Architecture

RI
 Sage Architecture + Design, LLC
 Siemens Industry—Building Technologies Division
 Stephen Greenleaf Architect
 Truth Box, Inc.
 Via Builders

VT
 Cushman Design Group, Inc.
 Energy Balance, Inc.
 Home Energy Design Services
 Michael Beattie Architect
 Ra Solar Company
 TruexCullins Architecture and Interior Design
 William Maclay Architects Planners

College/University

CT
 Tai Soo Kim Partners

FL
 Kenney College

MA
 Arrowstreet, Inc.
 CBI Consulting, Inc.
 Dietz & Company Architects, Inc.
 Dietz & Company Architects, Inc.
 Greene Energy Consultants, LLC
 Mount Wachusett Community College

ME
 Stewart Brecher Architects

NH
 Dartmouth College
 Keene State College

NY
 Hudson Valley Community College - TEC-SMART

VA
 American Public University

VT
 Sterling College

Communications
 MA
 GAIA Host Collective
 SJP Environmental Consulting, LLC

NY
 Northern Manhattan Improvement Corp

RI
 Green Machine PR

Consultant

CT
 Home Energy Technologies
 New Tapestry, LLC

MA
 Applied Ecologics
 Argo Consulting
 Brown Lindquist Fenuccio & Raber Architects, Inc.
 Coppingers Builders, LLC
 Energia
 Geoffrey H. Richon Company, Inc.
 Green River Architecture
 Nexpax, Inc.
 Precision Decisions, LLC
 Price Sustainability Associates, Inc.
 SJP Environmental Consulting, LLC

NY
 National Grid
 New York State Energy Research and Development Authority (NY-SEPSDAI)

VT
 Energy Futures Group
 Griswold Library

Domestic Water Heating

CT
 Wesson Energy Inc.

MA
 Alpine Solar Heat and Hot Water
 Caluwe Inc. - Hydro-to-Heat-Converter
 Clean Energy Design, LLC
 Cotuit Solar
 Energy and Design
 Grenery Solar Store, LLC
 Mass Renewables
 Renewable Sales LLC
 RST Thermal
 Seaside Solar Design/Builders
 Southpoint, LLC
 Wagner Solar, Inc.

PA
 Re:Vision Architecture

RI
 New Commons

TX
 ONTILITY

VT
 Energy Futures Group
 Stead Consulting

Consumer Information

Canada
 Public Service of New Hampshire

MA
 Greener Every Day
 Grenery Solar Store, LLC
 Home Energy Remedies, LLC
 Infrared Diagnostic, LLC
 Mass Audubon
 SJP Environmental Consulting, LLC
 Walden Street Web Services

NH
 Bona Fine Green Goods
 Build Green NH
 Pinkham Building & Solar Services
 The Energy Emporium

NJ
 Northern Manhattan Improvement Corp

VT
 Integrated Solar

Educator

MA
 Faulkner, Nicole
 Spirit Solar

Energy Audit Services

CT
 Home Energy Technologies
 The United Illuminating Company & CT Energy Efficiency Fund
 Wesson Energy Inc.

MA
 DMI
 Energy Engineering and Design, Inc.
 ERS-Energy Resource Solutions
 Greene Energy Consultants, LLC
 Home Energy Remedies, LLC
 Infrared Diagnostic, LLC
 Nexamp, Inc.
 NSTAR
 Price Sustainability Associates, Inc.
 Sustainable Energy Analytics
 The Boston Solar Company

ME
 Gendron Construction Services
 Hammersaw Solar - EarthNet Energy
 Heliotropic Technologies

NH
 Adros Energy
 Building Energy Technologies, LLC
 GDS Associates, Inc.

NJ
 Spector Associates Architects

NY
 eVANHEE Clean Energy
 Green Home Heroes, LLC
 National Grid
 Novus Engineering, PC
RI
Northeast Solar & Wind Power, LLC

VT
Home Energy Design Services
Ra Solar Company

Energy Conservation
CT
ATC Magnetics
DCS Energy
Home Energy Technologies
PAH Associates
Partners for Architecture
Schneider Electric Energy Solutions
The United Illuminating Company & CT Energy Efficiency Fund

RI
Northeast Solar & Wind Power, LLC

NH
Bona Fide Green Goods
Christopher P. Williams Architects, PLLC
Cape Sound Builders, LLC
Petersen Engineering, Inc.
R.L. Benton - Builder
Reno Engineering and Light Design
Solar Components Corporation Unitil

NJ
Spector Associates Architects
Torcon Energy Services

NY
Green Home Consulting, LLC
Green Home Heroes, LLC
Start to Finish Design and Remodeling

PA
Bakker & Lewis Architects
Energy Opportunities, Inc.

RI
Heartwood Group, Inc.
Siemens Industry - Building Technologies Division
Stephen Greenleaf Architect
Truth Box, Inc.

VT
BuildingGreen, LLC
Energy Balance, Inc.
Home Energy Design Services
Michael Beattie Architect
Window Quilt

ME
Ferry Beach Ecology School

Energy Education
MA
Applied Ecologics
Boston Community Capital
Cape & Islands Self-Reliance Corp.
Mark Allen Electric
NSTAR
Second Generation Energy
Solar Installation, LLC
SunBug Solar

NH
Adros Energy
Bill Wenzel Heating & Air Conditioning, Inc.

NY
eVANHEE Clean Energy
Novus Engineering, PC

VT
Integrated Solar Applications Corp

Green Electricity
Canada
Public Service of New Hampshire

CT
DCS Energy

MA
BPYS, Berkshire Photovoltaic Services
Cape & Islands Self-Reliance Corp.
Mark Allen Electric
NSTAR
Second Generation Energy
Solar Installation, LLC
SunBug Solar

NH
GreenSource Energy Solutions, LLC
TNT Electrical Contractor, LLC
Unitil

NY
In Site: Architecture
National Grid
Solar & Wind FX, Inc.

VT
A陈列Earth Renewables
groSolar

Home Inspections
MA
FLIR Systems

Hydroelectric
NH
Waterline Alternative Energies LLC

I.T.
MA
GAIA Host Collective
Indoor Air Quality
MA
ERS-Energy Resource Solutions
FLIR Systems
RI
Kelly Taylor Interior Design
VT
Ra Solar Company

Insulation
MA
Atlantic Weatherization, LLC
National Fiber
Paul Huijing, Inc. Construction and Engineering
Sustainable Retrofits
ME
Gendron Construction Services
NH
Brooks Post & Beam, Inc.
Building Energy Technologies, LLC
Mink Hill Timber Frame Homes, Inc.
Ridgeview Construction
PA
Foam Form Technologies
VT
Window Quilt

Insurance
MA
D. Francis Murphy Insurance - Insurance Made Simple
Malcolm & Parsons Insurance Agency, Inc.

Interior Design
MA
Sasaki Associates
NY
Phinney Design Group

Landscape Design/Construction
MA
Austin Design, Inc.
Royer Architects
Salmon Falls Ecological Design
Sasaki Associates
Vanasse Hangen Brustlin, Inc.
NY
Anthony J. Musso, Architect
In Site: Architecture
Stephen Tily, Architect
VT
Cushman Design Group, Inc.

Lighting Design
MA
ERS-Energy Resource Solutions
Kuhn Riddle Architects, Inc.
M.L. Schmitt, Inc.
NH
Reno Engineering and Light Design
NY
Anthony J. Musso, Architect
Novus Engineering, PC
RI
Kelly Taylor Interior Design
VT
Cushman Design Group, Inc.

Lighting Supply
MA
Fred Davis Corporation

Manufacturing
Japan
Solar Frontier Americas Inc.
CT
Schneider Electric Energy Solutions
MA
Solectria Renewables LLC
Spire Solar Systems
MN
The Energy Conservatory
NJ
Be Solar Energy
Lightway Green New Energy Co., Ltd.
NY
EnergyWright
SunEnergy Americas
PA
Foam Form Technologies

Marketing
MA
Recycled Paper Printing
RI
Green Machine PR

Other
MA
Cape & Islands Self-Reliance Corp.
Dennis K. Burke, Inc.
NSTAR
NH
R.L. Benton - Builder
NY
M.J. Chojnicki Architect, PC
PA
Craig Horowitz Woodworking
Nova Power Group, LLC
RI
Stephen Greenleaf Architect
VT
groSolar
Robert L. Spencer, AICP - Environmental Planning Consultant

Other Renewable Energy Generation
MA
Dennis K. Burke, Inc.
NSTAR
NH
R.L. Benton - Builder
NY
M.J. Chojnicki Architect, PC
PA
Nova Power Group, LLC
RI
Stephen Greenleaf Architect
VT
groSolar
Robert L. Spencer, AICP - Environmental Planning Consultant

Other Transportation Technologies/Services
MA
Cape & Islands Self-Reliance Corp.

PA
Foam Form Technologies

Marketing
MA
Recycled Paper Printing
RI
Green Machine PR

Other
MA
Cape & Islands Self-Reliance Corp.
Dennis K. Burke, Inc.

Dennis K. Burke, Inc.

Photography
MA
Matthew Cavanaugh Photography

Photovoltaics
Canada
Matrix Energy, Inc.

CA
Solar Frontier Americas Inc.

CT
Consulting Engineering Services
DCS Energy
Sunlight Solar Energy, Inc.

MA
A3 Architects, LLC
Ameresco
Arrowstreet, Inc.
Bonview Corporation
BPVS, Berkshire Photovoltaic Services
Cape & Islands Self-Reliance Corp.
Clean Energy Design, LLC
Coluit Solar
D. Francis Murphy Insurance - Insurance Made Simple
Energy and Design
Frontier Energy Solutions
GotSun-GoSolar.com
Green Energy Solar Store, LLC
M.L. Schmitt, Inc.
Maple Hill Architects, LLC
Mark Allen Electric
Mass Renewables
NEO Virtus Engineering, Inc.
New England Breeze, LLC
New England Renewable Energy Systems
New England Solar & Green Solutions
Nexamp, Inc.
Nexamp, Inc.
NorthEast Solar Design Associates
Precision Decisions, LLC
PV Squared
Renewable Sales LLC
Second Generation Energy
Solar Installation, LLC
Solar Store of Greenfield
SolarFlair Energy, Inc.
Solectria Renewables LLC
Southern New England Solar-Technologies LLC
SouthPoint, LLC
Spire Solar Systems
SunBug Solar
Sungage
The Boston Solar Company
Transformations, Inc.
Turn Key Builders, Inc.
Southern New England Solar-Technologies LLC  
Spirit Solar  

ME  
Hammersaw Solar-  
EarthNet Energy  
Heliotropic Technologies  
Solarotechnic Contractors, Inc.  

NH  
Polar Solar  
Shift Energy, LLC  
Solar Components Corporation  
Solar Source- A Division of  
The Melanson Co. Inc.  
The Energy Emporium  

NJ  
Be Solar Energy  

NY  
A-Best Energy Power  
Solar Plumbing Design  

PA  
Blue Moon Enterprises  

RI  
North East Green Initiative, LLC  
Northeast Solar & Wind Power, LLC  

TX  
ONTILITY  
VT  
HB Energy Solutions  
Home Comfort Warehouse  

Space Heating/Cooling  

Canada  
Matrix Energy, Inc.  

CT  
BBT Mechanical Services, LLC  

MA  
Alpine Solar Heat and Hot Water  
Caluwe Inc.  - Hydro-to-Heat-Convertor  
Express Plumbing  
F.A.I. Mechanical Contractors  
GeoSun Design  
Innovative Building & Design  
RJ Franey Mechanical Services, Inc.  
RST Thermal  
Seaside Solar Design/Builders  
Solar Store of Greenfield  
Wagner Solar, Inc.  

NH  
Optimal Energy Solutions, LLC  
Petersen Engineering, Inc.  
Shift Energy, LLC  

NY  
Upstate Solar, LLC  

VT  
Integrated Solar  

Translation  
MA  
Petra Schweitzer Translations  

Wind  
CT  
A.W. Hastings Co. - Integrity Windows and Doors  

MA  
Ai3 Architects, LLC  
Atlantic Weatherization, LLC  
Boston Green Building  
Cape & Islands Self-Reliance Corp.  
CBI Consulting, Inc.  
Clean Energy Design, LLC  
Cotuit Solar  
D. Francis Murphy Insurance - Insurance Made Simple  
Frontier Energy Solutions  
New England Renewable Energy Systems  
PV Squared  
Vanasse Hangen Brustlin, Inc.  

NY  
Building Energy Technologies, LLC  
Historic Window & Door Corp.  
Seacoast Energy Alternatives, Inc.  
[SEA Solar Store]  
TNT Electrical Contractor, LLC  
Waterline Alternative Energies LLC  

MA  
Massachusetts Clean Energy Center  

Frontier Energy Solutions  

NH  
Building Energy Technologies, LLC Historic Window & Door Corp.  

NY  
CEMBRA  

VT  
Window Quilt  

Workforce Development  
MA  

TOP TEN REASONS TO JOIN NESEA  

10. Whole systems thinking works better  
9. You can swim with the big fish in sustainable energy  
8. Because you want to build a sustainable future too  
7. You can air multiple points of view here  
6. You can grow your business by being listed in the premier directory for green professionals in the Northeast  
5. You can share and vet your ideas, your discoveries, your strikeouts, and your eurekas with like-minded professionals  
4. Where else can architects, engineers, builders, facilities managers, educators, and policy wonks mix it up, learn together, and actually have fun?  
3. You get a discount on the best sustainable/renewable energy conference in the Northeast  
2. You get to be at the center of a hub that links the ideas and the people who are living the future  
1. Because doing it all by yourself sucks  

JOIN NESEA TODAY  
NESEA.ORG/JOINNOW
A-Best Energy Power
Bar, Arie
375 Pearsall Avenue
Cedarhurst, NY 11516
Tel: 516-568-7785
Fax: 516-596-7434
info@abestenergypower.com
www.abestenergy.com

Description: Solar sales & installations. NY Metropolitan area, Long Island and N.J., licensed electrical contractor, NYSERDA approved installer. Contact an office near you in New York 718-766-5025; New Jersey 201-777-2374
Specialties: Photovoltaics, Solar, Hot Water, Wind

A.W. Hastings Co. — Integrity
Windows and Doors
Jackson, Bill
2 Pearson Way
Enfield, CT 06082
Tel: 860-394-3428
bjackson@awhastings.com
www.awhastings.com

Description: For over twenty five years A.W. Hastings & Co. has been a distributor for Marvin Windows & Doors, supplying quality window & door products to the industry throughout the northeast.
Specialties: Windows

ACI (Affordable Comfort, Inc.)
Fazio, Amy
32 Church Street
Suite 204
Waynesburg, PA 15370
Tel: 800-344-4866
Fax: 724-627-5226
afazio@affordablecomfort.org
www.affordablecomfort.com

Description: ACI Home Performance Conferences teach building science principles and provide networking to create energy efficient, comfortable, healthy, safe, durable homes. Visit our website.
Specialties: Environmental Education

Adros Energy
Currier, Matt
10 Northern Boulevard
Amherst, NH 03031
Tel: 603-880-6007
Fax: 603-880-6015
info@adrosenergy.com
www.adrosenergy.com

Description: Adros Energy is a leading supplier of alternative energy systems and specialist in BPI certified energy audits and RESNET HERS rating. We are experts in Solar, Geothermal and Wind power technology. We educate residential and commercial consumers on how to harvest renewable energy to reduce, or even eliminate, soaring heating/cooling and electric bills. Adros Energy sells and installs high quality, custom, Solar, Geothermal and Wind systems to meet each consumer’s budget and clean energy goals. We simplify the often complex process of converting to green energy and help you get the many incentives available to reduce your system costs. Customer satisfaction drives every aspect of the company’s operation to assure customers receive superb service and high value from their system.
Specialties: Energy Audit Services, Geothermal, Photovoltaics

Al3 Architects, LLC
Jordan, James
286 Boston Post Road
Boston, MA 01778
Tel: 508-358-0790
Fax: 508-358-0791
jordan@al3architects.com
www.al3.com

Description: Designers of educational facilities.
Specialties: Building Design/Construction, Photovoltaics, Wind

Air Barrier Solutions, LLC
Harmony, Larry
257 Middle Road
Crown Point, NY 12928
Tel: 877-226-2641
Fax: 518-597-3218
lharmon@airbarriersolutions.com
www.airbarriersolutions.com

Description: Designers of educational facilities.
Specialties: Building Design/Construction, Photovoltaics, Wind

AllEarth Renewables
Bijur, Anne
94 Harvest Lane
Williston, VT 05495
Tel: 802-872-9600
abijur@allearthrenewables.com
www.allearthrenewables.com

Description: AllEarth Renewables, formerly Earth Turbines, Inc., Vermont’s only manufacturer of residential wind turbines and the AllSun Tracker dual-axis solar system, provides grid-connected renewable energy systems that lessen dependence on fossil fuels and reduce greenhouse gas emissions. Our goal is to offer turnkey solutions that harness the power of the wind and sun for homes and businesses.
Specialties: Green Electricity, Photovoltaics, Wind

Alpine Solar Heat and Hot Water
Besnoff, Stu
189 North Street
Windsor, MA 01270
Tel: 413-684-3950
stu@alpinesolarheat.com
www.alpinesolarheat.com

Description: Evacuated tube solar hot water collectors for sale. Visit and see: operational domestic hot water, whole house heating, and swimming pool heating systems. Affordable Prices!
Specialties: Domestic Water Heating, Solar Hot Water, Space Heating/Cooling

Alteris Renewables
Chew, Robert
28 Wolcott Street
Providence, RI 02908
Tel: 800-339-7804
Fax: 401-396-9902
info@alterisinc.com
www.alterisinc.com

Description: Experience, expertise, results and high customer satisfaction have made Alteris the number one solar and wind energy installer in the Northeast for home and business. Serving RI.
Specialties: Alternative Technologies, Photovoltaics, Wind

Ameresco
Morrison, Robert
16 October Road
Sudbury, MA 01776
Tel: 508-561-7553
robert.l.morrison@comcast.net
www.ameresco.com

Description: Ameresco delivers comprehensive energy management solutions that drive energy efficiency, leverage renewable energy and achieve profitability and sustainability goals.
Specialties: Alternative Technologies, Biomass, Photovoltaics

American Public University
Sehring, Tatiana
10110 Battleview Parkway
Suite # 114
Bristow, VA 20110
Tel: 703-965-0016
Fax: 703-367-9180
tsehring@apus.edu
www.apu.apus.edu
Specialties: College/University

Anthony J. Musso, Architect
Musso, Anthony
181 Main Street
Cold Spring Harbor, NY 11724
Tel: 631-367-8626
Fax: 631-367-4276
ajmusso@aol.com

Description: An architectural firm practicing architecture, interior architecture, landscape design and sustainable design, “The architecture for today, respects the past; while solving our contemporary needs in a responsible sensible, design.

Applied Ecologics
Eggleton, David
28 Rich Road
Woburn, MA 01801-5808
Tel: 781-721-2881
dse@appliedecologics.com

Description: -permacultural Meaningful Makeovers - individuals thru communities
-focus on the 1000 Home Challenge
-focus on Whole is Beautiful (renewed campaign for balance)
Specialties: Consultant, Energy Conservation, Environmental Education

Argo Consulting
Argo, Liz
7 Arena Drive
Orleans, MA 02653
Tel: 774-772-1812
argoproductions@gmail.com
www.argoconsultingservices.com

Description: Argo Consulting provides marketing strategy, outreach coordination, and project development services for renewable energy projects.
Specialties: Consultant

Arrowstreet, Inc.
Batchelor, James
212 Elm Street
Somererville, MA 02144
Tel: 617-623-5555
Fax: 617-625-4646
comcast.net

Description: Arrowstreet is a 150-person, multi-disciplinary firm providing architecture, planning, interiors, and graphic design services. The award-winning firm designed the first platinum LEED certified...
building in Boston.

**Specialties:** Building Design/Construction, College/University, Photovoltaics

**ATC Magnetics**
Malley, Walter
991 Main Street
Suite 3c
East Hartford, CT 06108
Tel: 360-434-1432
waltmalley@teamatc.net

**Description:** ATC Magnetics provides energy reducing permanent magnetic couplings to business and industry. Our couplings separate the motor from the load and transmit the torque across a 1/16” air gap. This results in a substantial reduction in inrush or demand current. We have fixed gap, delayed start (Conveyors) torque limiting, and adjustable speed to 4000 HP.

**Specialties:** Energy Conservation

**Atlantic Weatherization, LLC**
Palm, Eric
61R Jefferson Avenue
Salem, MA 01970
Tel: 978-744-8143
Fax: 978-745-2200
tpalmo1@comcast.net

**Description:** Atlantic Weatherization, LLC has been providing energy conservation services for 24 years. We are a BPI certified, EPA and Mass Lead-Safe Certified contractor. In addition, we are an authorized Honeywell and NGRID/NSTAR Contractor, as well as a participating contractor for Massachusetts DHCD agencies.

We specialize in all energy conservation services: insulation (cellulose and fiberglass), airsealing, roofing, window/door replacement, and all misc. conservation measures.

**Specialties:** Energy Conservation, Insulation, Windows

**Austin Design, Inc.**
Austin, Bill
16 Call Road
Colrain, MA 01340
Tel: 413-624-9669
Fax: 413-624-9635
office@austindesign.biz
www.austindesign.biz

**Description:** Austin Design, Inc. provides architectural design services for homes, businesses and communities. We advocate a team approach among client, builder and architect that encourages the sharing of expertise and a passion for good design.

**Specialties:** Building Design/Construction, Landscape Design/Construction, Remodeling

**Azimuth Construction, Inc.**
Simon, Marc
195 High Street
Ipswich, MA 01938
Tel: 978-356-7501
azimuth5@verizon.net
www.azimuthconstruction.com

**Description:** Residential general contractor specializing in energy efficient construction and remodeling for over 20 years. Recently completed first Energy Star certified solar home in Ipswich.

**Specialties:** Building Design/Construction, Remodeling

**Bakker & Lewis Architects**
Bakker, Margaret
Lewis, Robert
243 Jackson Road
Shavertown, PA 18708
Tel: 570-675-8843
mbakker@bakker-lewis.com
www.bakker-lewis.com

**Description:** We are a small architectural firm specializing in designing new and retrofitting existing buildings which are both responsive to individual needs and that contribute to a greener environment.

**Specialties:** Building Design/Construction, Energy Conservation, Remodeling

**Barker Architects**
Barker, Kyle
2 Kennedy Street
Concord, NH 03301
Tel: 603-225-3160
kyle@barkerarchitects.com
http://www.barkerarchitects.com/service.html

**Description:** Barker Architects, PLLC is an architectural firm specializing in socially responsible and sustainable design.

**Specialties:** Building Design/Construction

**Bay State Design, Inc.**
Govalet, Gordon
241 Boston Post Road West
Marlborough, MA 01752
Tel: 508-229-4142
gordon.govalet@maxtontechn.com
www.baystatedesign.com

**Description:** Founded in March of 1985, Bay State Design Inc., provides comprehensive, professional architectural and engineering design services ranging from site selection through construction administration. The firm’s in-house staff includes over 30 Engineers, Architects, Project Managers, CAD Designers and Graphics Design personnel. Our Architectural Department provides Project Management, Space Planning and Design for public, institutional and commercial clients. Our Structural Engineers are registered in all New England States and are well versed in analysis and modification of existing structures. Our Graphic Design staff specializes in Photosimulation presentations for zoning and historic submittals. At BSD, quality control is paramount. Our in-house Quality Assurance Process utilizes experienced professionals in each major discipline to review all major projects and coordinate the work of our outside consultants. Our clients are encouraged to participate in these Project Reviews.

**Specialties:** Building Design/Construction, Remodeling, Research

**BBT Mechanical Services, LLC**
Miller, Chris
22 Wapping Wood Road
Ellington, CT 06029-3917
Tel: 860-209-9917
Fax: 860-896-5830
bbtmechanical@snet.net

**Specialties:** Space Heating/Cooling

**Be Solar Energy**
Behmoaras, Mike
263 Veterans Boulevard
Carlstadt, NJ 07072
Tel: 201-933-7200
Fax: 201-933-2700
mike@besolarenergy.com
www.besolarenergy.com

**Description:** OE and private label Manufacturer of SolarThermal FlatPlate Collectors and systems of hot water, space, and pool heating in homes, hotels, schools, and wherever hot water is used.

**Specialties:** Domestic Water Heating, Manufacturing, Solar Hot Water

**BEAM Construction Associates Inc.**
Butcher, Robert
PO Box 101
North Sandwich, NH 03259
Tel: 603-284-6187
Fax: 603-284-7048
rdesigns@lr.net

**Description:** BEAM Construction Associates, Inc. is a Design/Build Co. that offers complete site & building design, architectural drafting, master craftsmanship, & project mgmt. services.

**Specialties:** Building Design/Construction

**Bill Wenzel Heating & Air Conditioning, Inc.**
Wenzel, Bill
37 Scenic Vista Way
Merriamack, NH 03054
Tel: 603-429-8082
Fax: 603-429-6393
bill@bilwenzelgeo.com
www.billwenzelgeo.com

**Description:** Geothermal installation specialists with over 14 years experience in geothermal and over 30 years experience in heating and air conditioning.

**Specialties:** Geothermal

**Blue Moon Enterprises**
Mellinger, Steve
218D W Main Street #D
Leola, PA 17540-2223
Tel: 717-656-2299
bluemoon@bmesolar.com
www.bmesolar.com

**Description:** We are Solar System designers that work with Home Comfort specialists that allow us to bring a total home experience of Renewable and Sustainable living to our clientele.

**Specialties:** Solar Hot Water, Photovoltaics, Alternative Technologies

**Blue Sea Development Company**
Bluestone, Les
164 Main Street
Huntington, NY 11743
Tel: 631-923-0081 x2
Fax: 631-923-0083
les.bluestone@bluesteadev.com

**Description:** Blue Sea Development Company/Blue Sea Construction Company is an affordable housing developer/general contractor working primarily in the New York City metropolitan area.

**Specialties:** Building Design/Construction
Bona Fide Green Goods
De Moulpied, Deborah
35 South Main Street
Concord, NH 03301
Tel: 603-224-9700
Fax: 603-224-9700
info@bonafidegreengoods.com
www.bonafidegreengoods.com
Description: Bona Fide is an online green store dedicated to the highest standards in eco-criteria and social responsibility with the lowest impact to the earth and its inhabitants.
Specialties: Consumer Information, Energy Conservation, Retail

Boston Green Building
Butler, Brian
49 Dartmouth Street
Somerville, MA 02145
Tel: 617-718-0208
Fax: 617-202-3783
info@bostongreenbuilding.com
www.bostongreenbuilding.com
Description: Boston Green Building provides ecologically-oriented construction and remodeling services throughout the Greater Boston area.

Bone Builders
Bone, James
42 Newmarch Street
Ipswich, MA 01938-2440
Tel: 978-857-6800
jbonebldrs@verizon.net
www.jbonebuilders.com

Bonview Corporation
Bonfiglioli, Stephen
237 Thompson Street
Middleborough, MA 02346
Tel: 508-946-4944
Fax: 508-946-4944
bonfiglioli15@verizon.net
www.meadowbrookefarm.com

Bourke Builders
Bourke, Paul
77 Long Hill Road
Leverett, MA 01054
Tel: 413-548-9214
Fax: 413-548-9214
paul@bourkebuilders.net
www.bourkebuilders.net
Description: Passionate in our dedication to energy efficient, green building for over 25 years, Bourke Builders offers design-build services for Hampshire and Franklin counties of Western MA.
Specialties: Building Design/Construction, Remodeling

BPC Green Builders, LLC
Trolle, Michael
523 Danbury Road
Wilton, CT 06897-2233
Tel: 203-563-9909
Fax: 203-563-9912
info@bpcgreenbuilders.com
www.bpcgreenbuilders.com
Description: Green building for new and existing homes based on residential building science and other sustainability considerations. Award-winning builder with ten years experience building high performance, green homes.
Specialties: Building Design/Construction

BPVS, Berkshire Photovoltaic Services
Kitfoyle, Christopher Derby
46 Howland Avenue
Adams, MA 01220
Tel: 413-743-6152
Fax: 413-743-4827
info@bpvs.com
www.bpvs.com
Description: Since 1985, the highest quality design and installation of efficient and durable photovoltaic systems featuring Schott solar modules.
Specialties: Green Electricity, Photovoltaics

Brooks Post & Beam, Inc.
Freeman, Paul
208 Pettingill Hill Road
Lyndeborough, NH 03082
Tel: 603-654-3210
Fax: 530-654-7376
paul@spbrooks.com
www.brookspostandbeam.com
Description: Brooks Post & Beam has been building energy efficient, sustainable homes throughout New England for over 40 years. We have been building homes, barns and commercial buildings sustainably for decades.

Build Green NH
Fischer, Elizabeth
119 Airport Road
Concord, NH 03301
Tel: 603-228-0351
erfischer@buildgreennh.com
www.buildgreennh.com
Description: Build Green NH works to promote, educate and support the practice of green building and remodeling in New Hampshire.
Specialties: Consumer Information, Real Estate, Remodeling

Building Co
Grinnell, Greg
P.O. Box 191
Eaton, NH 03832
Tel: 603-387-2278
grinnellassociatesnorth@gmail.com
www.grinnellassociatesnorth.com
Description: I have been in business in the trades in Mount Washington Valley, NH for 24 years. We build complete homes to additions to remodeling.
Specialties: Building Design/Construction, Remodeling, Roofing

Brown Lindquist Fenuccio & Raber Architects, Inc.
Fenuccio, Richard
203 Willow Street
Suite A
Yarmouthport, MA 02675
Tel: 502-362-8382
Fax: 502-362-2828
rick@capearchitects.com
www.capearchitects.com
Description: Brown Lindquist Fenuccio & Raber Architects, Inc. is a diversified architectural firm located in historic Yarmouthport, Massachusetts. We provide comprehensive ar-
Building Energy Technologies, LLC
LaTourette, Donald
8 Oakmont Drive
Concord, NH 03301
Tel: 603-724-7849
Fax: 603-369-6468
dlatourette@bidenergytech.com
Specialties: Windows, Insulation, Energy Audit Services

BuildingGreen, LLC
Wilson, Jerelyn
122 Bierce Street
Suite 30
Brattleboro, VT 05301
Tel: 802-257-7300 x102
Fax: 802-257-7304
jerelyn@buildinggreen.com
www.buildinggreen.com
Description: BuildingGreen provides building industry professionals with well-researched information on environmentally sound building practices and green products both in print and online.
Specialties: Alternative Technologies, Energy Conservation, Environmental Education

Byggmeister, Inc.
Eldrenkamp, Paul
667 Sawmill Brook Parkway
Newton, MA 02459
Tel: 617-527-7871
Fax: 617-527-7872
paul@byggmeister.com
www.byggmeister.com
Description: Byggmeister is a residential design-build firm working in metropolitan Boston and focusing on high-performance design and construction. We define a "high performance" home as one that requires a minimum amount of energy to heat, cool, light, and maintain over time. Byggmeister provides certified Passive House consulting and HERS ratings and is on the qualified contractors list for National Grid's deep energy retrofit program. In addition to design-build remodeling, we provide detailed energy audits and work with homeowners to develop master plans for incremental deep energy retrofits that can be implemented over a period of several years.
Specialties: Building Design/Construction, Energy Conservation, Remodeling

Calorique LLC
Paliwoda, Irena
2380 Cranberry Highway
West Wareham, MA 02576
Tel: 508-291-4224
Fax: 508-291-2299
i.paliwoda@calorique.com
www.calorique.com
Description: Calorique is the global leader in manufacturing low cost, energy efficient radiant heat elements for a wide range of uses. As the technology developed globally for alternative renewable energy and efficient use of that energy, Calorique developed a flexible electric radiant heating film that maximizes the efficient conductive properties of our carbon elements. Today, the Calorique flexible electric radiant heat system continues to be a superior, energy efficient, low cost alternative for eco friendly homes and facilities in the US as well as for use in countries around the world where renewable energy targets are being implemented.
Specialties: Radiant Heating

Caluwe Inc.
- Hydro-to-Heat-Convertor
Caluwe, Marc
9 Wheatland Street
Burlington, MA 01803
Tel: 781-306-8583
marc@hydro-to-heat-convertor.com
www.hydro-to-heat-convertor.com
Description: Heat your whole house and more with a Hydro-to-Heat-Convertor an energy efficient and heat recovering hydronic wood stove or fireplace insert. The Hydro-to-Heat-Convertor is basically a hydronic wood stove or fire place insert which generates cozy radiant and convection heat. Most of the valuable energy is recovered via the internal heat recovery system that allows water to be circulated to a central heating system. The Hydro-to-Heat-Convertor can work stand-alone or in combination with an existing central heating system, warm water boiler or solar hot water system. The Hydro-to-Heat-Convertor has a 4-staged combustion system with catalytic combustor afterburn what results in ultra clean combustion of cord wood. The Hydro-to-Heat-Convertor uses an on/off thermostat to control the insert which generates cozy radiant and convection heat. Most of the valuable energy is recovered via the internal heat recovery system. The Hydro-to-Heat-Convertor has a 4-staged combustion system with catalytic combustor afterburn what results in ultra clean combustion of cord wood. The Hydro-to-Heat-Convertor uses an on/off thermostat to control the convertor afterburn which results in ultra clean combustion of cord wood. The Hydro-to-Heat-Convertor uses an on/off thermostat to adjust combustion air supply in relation to the desired, pre-set, water outlet temperature, and as such automatically adapts to the type of fuel being used and the varying heat consumption of your home's central heating system.
Specialties: Biomass, Domestic Water Heating, Space Heating/ Cooling

Cape & Islands Self-Reliance Corp.
Amstrong, Megan
23A Edgerton Drive
North Falmouth, MA 02556
Tel: 508-563-6633
Fax: 508-563-1123
reliance@reliance.org
www.reliance.org
Specialties: Green Electricity, Other Transportation Technologies/Services, Photovoltaics, Wind

Cape Painting & Carpentry, Inc.
Kroll, Peter
24 Bay Road
P.O. Box 39
North Falmouth, MA 02556-0039
Tel: 508-563-9393
Fax: 508-563-9399
pmarshallik@aol.com
www.capecarpentry.com
Description: An established renovation, restoration and custom home building contractor that has incorporated sustainable and green practices for over 30 years. Employee owned.
Specialties: Building Design/Construction, Energy Conservation, Remodeling

Capizzi Home Improvement
Capizzi, Thomas
1645 Newtown Road
Cotuit, MA 02635
Tel: 508-428-9518
Fax: 508-428-1547
chi@capizzihome.com
www.capizzihome.com
Description: A remodeling and restoration company specializing in energy efficient room additions, 2nd stories, sunrooms, kitchens, bathrooms, siding, roofing, insulation and full-service home improvements.
Specialties: Building Design/Construction, Remodeling, Roofing

Christopher P. Williams Architects, PLLC
Williams, Christopher
P.O. Box 703
4 Stevens Avenue
Meredith, NH 03253
Tel: 603-279-6513
Fax: 603-279-5666
info@cpwarchitects.com
www.cpwarchitects.com
Description: Specializing in sustainable building practices that conserve natural resources and incorporate green building techniques to safeguard the ecosystem and lower building costs.
Specialties: Building Design/Construction, Energy Conservation, Remodeling

CBI Consulting, Inc.
Teller, Michael
250 Dorchester Avenue
Boston, MA 02127
Tel: 617-268-8977
Fax: 617-444-2971
mteller@cbi1948.com
www.cbi1948inc.com
Specialties: Building Design/Construction, College/University, Roofing, Windows

CEMBA
Sandbichler, Thomas
68 Hosking Lane
New York, NY 12404
Tel: 212-334-3370
Fax: 845-626-1242
info@cemba.us
www.cemba.us
Description: Cemba Inc. is a New York based design company specialized in flexible design strategies. We are a trade partner of the Austrian windows and doors manufacturer RIEDER KG.
Specialties: Building Design/Construction, Windows

CBI Consulting, Inc.
Teller, Michael
250 Dorchester Avenue
Boston, MA 02127
Tel: 617-268-8977
Fax: 617-444-2971
mteller@cbi1948.com
www.cbi1948inc.com
Specialties: Building Design/Construction, College/University, Roofing, Windows

Christopher P. Williams Architects, PLLC
Williams, Christopher
P.O. Box 703
4 Stevens Avenue
Meredith, NH 03253
Tel: 603-279-6513
Fax: 603-279-5666
info@cpwarchitects.com
www.cpwarchitects.com
Description: Specializing in sustainable building practices that conserve natural resources and incorporate green building techniques to safeguard the ecosystem and lower building costs.
Specialties: Building Design/Construction, Energy Conservation, Remodeling

CBI Consulting, Inc.
Teller, Michael
250 Dorchester Avenue
Boston, MA 02127
Tel: 617-268-8977
Fax: 617-444-2971
mteller@cbi1948.com
www.cbi1948inc.com
Specialties: Building Design/Construction, College/University, Roofing, Windows

CEMBA
Sandbichler, Thomas
68 Hosking Lane
New York, NY 12404
Tel: 212-334-3370
Fax: 845-626-1242
info@cemba.us
www.cemba.us
Description: Cemba Inc. is a New York based design company specialized in flexible design strategies. We are a trade partner of the Austrian windows and doors manufacturer RIEDER KG.
Specialties: Building Design/Construction, Windows

Christopher P. Williams Architects, PLLC
Williams, Christopher
P.O. Box 703
4 Stevens Avenue
Meredith, NH 03253
Tel: 603-279-6513
Fax: 603-279-5666
info@cpwarchitects.com
www.cpwarchitects.com
Description: Specializing in sustainable building practices that conserve natural resources and incorporate green building techniques to safeguard the ecosystem and lower building costs.
Specialties: Building Design/Construction, Energy Conservation, Remodeling
Clean Energy Design, LLC
Wineman, Thomas
P.O. Box 1954
North Falmouth, MA 02556
Tel: 508-563-6990
Fax: 508-428-0370
info@cleanenergydesign.com
www.cleanenergydesign.com
Description: With over a dozen years of experience in designing high performance, high quality renewable energy systems, Clean Energy Design can provide the best, most cost effective systems for your clean energy needs. We maintain an insightful and comprehensive approach balancing clean energy solutions with recommendations on energy efficiency. Our company specializes in integrating larger solar thermal systems with radiant floor and space heating. With our extensive research and hands on experience we are able to provide our clients with the most innovative, integrated systems.
Specialties: Domestic Water Heating, Photovoltaics, Wind

Coldham & Hartman Architects
Hartman, Thomas
155 Pine Street
Amherst, MA 01002
Tel: 413-549-3616
Fax: 413-549-6802
tom@coldhamandhartman.com
www.coldhamandhartman.com
Description: Coldham & Hartman Architects provides full service professional design for institutional, commercial and residential clients committed to making green buildings throughout the Northeast. C&H is dedicated to upgrading the existing structures of the Northeast for a changing energy climate by providing Deep Energy Retrofit design and master plan services. www.coldhamandhartman.com/DER
Specialties: Building Design/Construction, Energy Conservation, Remodeling

Coneco Energy
McGonigle, Michael
4 First Street
Bridgewater, MA 02324
Tel: 508-443-5011
Fax: 508-443-5013
mmcgonigle@coneco.com
www.coneco.com
Description: Established in 1989, Coneco Engineers & Scientists, Incorporated was founded on the premise that providing innovative and cost effective management and design solutions is the most successful way to achieve the goals of our residential, commercial, industrial, and municipal clients. As we’ve built our professional consulting and engineering practice over the past 2 decades which has grown to exceed 60 professionals, we’ve remained committed to our founding principle. Dedicating ourselves to understanding regulatory changes and technological advances, this commitment enables us to meet the ever changing needs of our clients and their projects.
Specialties: Geothermal, Energy Conservation, Engineering Services

Consulting Engineering Services
Smith, Delbert
811 Middle Street
Middletown, CT 06457
Tel: 860-632-1682
dsmith@cesct.com
www.cesct.com
Description: CES provides exceptional MEP Engineering, Commissioning, CA and Sustainable Design services. CES has an outstanding record of providing high caliber service to 100s of clients.
Specialties: Building Design/Construction, Geothermal, Photovoltaics

Coppinger Builders, LLC
Coppinger, Lisa & Tim
151B North Leverett Road
Leverett, MA 01054
Tel: 413-367-9137
lcopp@crocker.com
Description: We are a local, worker owned manufacturer/installer of standing seam metal roofing - an energy efficient, sustainable, recycled/recyclable, 80+ years roofing system. We also consult on roof insulation/ventilation as well as design.
Specialties: Roofing, Consultant

Cotuit Solar
Geyser, Conrad
P.O. Box 89
66 Old Shore Road
Cotuit, MA 02635
Tel: 508-428-8442
Fax: 508-428-8441
conradg@cape.com
www.cotuissolar.com
Description: Solar thermal, photovoltaics, wind and wastewater alternative engineering, installation and service. In business since 1988.
Specialties: Domestic Water Heating, Photovoltaics, Wind

Craig Horowitz Woodworking
Horowitz, Craig
1011 Fairview Drive
York, PA 17403-3609
Tel: 717-848-1726
Specialties: Other

Cushman Design Group, Inc.
Cushman, Milford
P.O. Box 655
100 Mountain Road
Stowe, VT 05672
Tel: 802-253-2169
Fax: 802-253-2160
info@cushmananddesign.com
www.cushmananddesign.com
Description: Offering personalized residential design services for those who value elegant design, natural materials and environmental consciousness in their home.
Specialties: Building Design/Construction, Landscape Design/Construction, Lighting Design

D. Francis Murphy Insurance—Insurance Made Simple
Ware, RWCS, Michael
200 Main Street
Marlborough, MA 01752
Tel: 508-787-5124
Fax: 508-485-3168
mware@dfmurphy.com
www.dfmurphy.com
Description: Facilitate Renewable Energy Insurance & Bonding Products for Mfg, Contracting, PPA’s, and End User/Property Hosts, & Municipalities for Solar, Wind, Geo, & Hydro.
Lines of coverage include: General Liability, Professional Liability, Property, Builders Risk, Commercial Auto, Umbrella/Excess Liability, Workers Compensation, Employer Practices Liability, Cyber Liability, Directors & Officers Liability, Executive & Key Man Life Insurance, & Group Benefits.
*Unique & Very Competitive Builders Risk Program for PPA’s which is then converted to Property Insurance once the PPA is Commissioned. BR Coverage includes Hard & Soft Cost, Hot Testing, & Delay in Completion. Property includes Special Form, Equipment Breakdown, & Loss of Income*
Specialties: Insurance, Photovoltaics, Wind

Dartmouth College
Baker-Berry Library
6025 Baker-Berry Library
Hanover, NH 03755-3560
Tel: 603-646-2236
Specialties: Library, College/University

David Whitney Architect
Whitney, David
49 Linden Street
Arlington, MA 02476
Tel: 781-643-0758
Fax: 413-832-8052
mail@davidwhitney.com
www.davidwhitney.com
Description: I am a residential architect concerned about energy use and environmental impact. My projects range from additions and renovations to new home construction. You can see images and descriptions and more information at my website.
Specialties: Building Design/Construction, Remodeling

DCS Energy
Bradway, Craig
P.O. Box 320
South Glastonbury, CT 06073
Tel: 860-657-0675
Fax: 866-403-6517
support@dcsenergy.com
www.dcsenergy.com
Description: DCS Energy provides low cost PV solar systems for the home and business owner. Our solar plans include a unique purchase plan and SPPA. Check us out at www.DCSenergy.com.
Specialties: Energy Conservation, Green Electricity, Photovoltaics

Dennis K. Burke, Inc.
Burke, Ed
P.O. Box 6069
286 Eastern Avenue
Chelsea, MA 02150
Tel: 617-884-7800
Fax: 617-884-7638
ed.burke@burkeoil.com
www.burkeoil.com
Description: One of New England’s largest suppliers of diesel fuels, gasoline and motor oil products. DKB was the state’s first supplier to offer biodiesel and C85 at the pump.
Specialties: Other Renewable Energy Generation, Other Transportation Technologies/Services
**Dietz & Company Architects, Inc.**
Sternick, Marc
17 Hampden Street
Springfield, MA 01103
Tel: 413-733-6798
Fax: 413-732-4385
marcs@dietzarch.com
www.dietzandcompanyarchitects.com

**Description:** The largest full service architectural firm in Springfield, with four LEED AP architects we are committed to thoughtful, sustainable and contextually appropriate designs.

**Specialties:** Building Design/Construction, College/University, Energy Conservation

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**DMI**
Stevens, Alec
35 Walnut Street
Wellesley, MA 02481
Tel: 718-431-1100 x11
astevens@dmiinc.com
www.dmiinc.com

**Description:** DMI specializes in providing expert consulting and engineering services to improve energy efficiency and operation of commercial, industrial, institutional, and large-scale residential facilities. DMI has established itself as one of the most respected energy engineering firms in New England with unsurpassed attention to detail and quality.

**Specialties:** Energy Audit Services, Energy Conservation, Energy Monitoring

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**Eco+Plan Architecture, LLC**
Baum, Scott
574 Bernardston Road
Greenfield, MA 01301-2265
Tel: 413-773-7559
sbbaum@ecoplanarchitecture.com
www.ecoplanarchitecture.com

**Description:** Eco+Plan specializes in creating affordable, superinsulated and zero energy homes. These homes are both energy and resource efficient, utilizing advanced building techniques and local natural resources. Eco+Plan has extensive experience with various alternative building systems. Through optimizing your building system and your approach to construction Eco+Plan can maximize your construction dollar. We are designing superinsulated buildings today that cost less to construct than conventional non-superinsulated buildings.

**Specialties:** Alternative Technologies, Building Design/Construction, Energy Conservation

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**Energy & Sustainability Partners**
Braman, James
19 Upland Road
Arlington, MA 02474
Tel: 617-584-4288
jamie.braman@espgreen.com

**Description:** Specialties: Alternative Technologies, Building Design/Construction, Energy Conservation

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**EcoRealty**
Hopkins, Dave
P.O. Box 3007
Amherst, MA 01004
Tel: 413-259-9800
Fax: 413-625-6638
dave@ecorealty.org
www.ecorealty.org

**Description:** EcoRealty is an environmentally friendly buyer brokerage with a special interest in green building, farming, and living local economies.

**Specialties:** Real Estate

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**Energy Balance, Inc.**
Shapiro, Andrew
160 White Rock Drive, #1
Montpelier, VT 05602-9455
Tel: 802-229-5676
andy@energybalance.us

**Description:** Andy works as Energy Balance, Inc., on high performance building design and the Vermont Energy Education Program.

**Specialties:** Building Design/Construction, Energy Conservation, Environmental Education

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**Energo**
Rossmassler, Tom
242 Suffolk Street
Holyoke, MA 01040
Tel: 413-322-3111
tomr@energiaus.com

**Specialties:** Building Design/Construction, Consultant, Alternative Technologies

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**Eco Sound Builders, LLC**
Korpi, Ethan
P.O. Box 55
Portsmouth, NH 03802
Tel: 603-986-8467
ekorpi.ecosound@gmail.com
www.ecosoundbuilders.com

**Description:** We are driven to build homes with individuality and environmental responsibility. We seek to create high performance homes for the next generation of efficient energy use.

**Specialties:** Building Design/Construction, Consultant, Energy Conservation

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**Eco Power Solutions, Inc.**
Struck, Dorianne
306 Route 94
Vernon, NJ 07462
Tel: 973-764-9636
dorianne@eps-electric.com
www.eps-electric.com

**Description:** Electrical Power Solutions (EPS) is at the forefront of societal advances by embracing the power of the sun. Focusing on renewable energy resources; EPS is driven by giving it’s customers an opportunity to be involved in the green revolution.

**Specialties:** Energy Conservation, Photovoltaics, Alternative Technologies

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**Energy Engineering and Design, Inc.**
Ward, David
65 Main Street
Framingham, MA 01702
Tel: 508-405-1946
info@energyengineeringinc.com
www.energyengineeringinc.com

**Description:** EE&D has the ability to develop a customized facility improvement program that fits your individual needs in the most cost effective way.

**Specialties:** Engineering Services, Energy Monitoring, Energy Audit Services
Energy Futures Group
Faesy, Richard
P.O. Box 587
Hinesburg, VT 05461
Tel: 802-482-5001
Fax: 802-329-2143
rfaesy@energyfuturesgroup.com
www.energyfuturesgroup.com

Description: Energy Futures Group (EFG) is a consulting firm that provides clients specialized expertise on energy efficiency, markets, programs, and policies. It was founded in April 2010 by Chris Neme, Richard Faesy and Glenn Reed, each of whom has more than 20 years experience in the energy efficiency industry.

We bring to our work a unique combination of technical, economic, program and policy expertise. EFG is currently working with a range of clients including consumer advocates, government agencies, environmental groups, other consultants and utilities in more than 10 states and provinces. During the course of their careers, EFG principals have worked in more than 30 states and provinces, as well as several countries in Europe and Asia.

Specialties: Public Policy, Consultant, Consumer Information

Energy Opportunities, Inc.
Sheffer, Marcus
1200 East Camping Area Road
Wellsville, PA 17365-9783
Tel: 717-292-2636
sheffer@sevensgroup.com
www.sevensgroup.com

Description: Energy Opportunities provides services focused on energy issues and the interface of nature and human enterprises. Founded in 1993, EO is also a part of 7Group, LLC.

Specialties: Building Design/Construction, Energy Conservation, Environmental Education

Engineered Solutions, Inc.
Quinlan, Ed
6 Union Street
Natick, MA 01760
Tel: 508-647-9200
equinlan@engsolutions.com
www.engsolutions.com

Description: Engineered Solutions Inc. is a Mechanical/Electrical consulting engineering firm that specializes in building infrastructure analysis and design with heavy emphasis on Energy Efficiency and Green Design. Our experienced hands-on team offers high quality, customized engineering services to clients in the Greater Boston area.

E3’s successful approach is client-focused, with direct personal involvement by its two founding principals, who are supported by a dedicated, experienced staff of senior level project engineers and support staff. Over the past 20 years, E3 has relied on repeat clients and word of mouth references for a vast majority of our work.

Our emphasis on Energy Efficiency and Green Design is not a recent development. Starting with their post graduate education and through-out their careers, the founding Principals of the firm (Rick Dirienzo and Ed Quinlan) have embraced sustainable design as a fundamental engineering concept.

Maintaining the highest level of service to our clients has been the key to our success.

Specialties: Engineering Services, Building Design/Construction, Alternative Technologies

ERS—Energy Resource Solutions
Epstein, Gary
13 Railroad Square
Suite 504
Haverhill, MA 01832
Tel: 978-521-2550
Fax: 978-521-4588
info@ers-inc.com
www.ers-inc.com

Description: ERS assists customers solve energy and resource problems in a cost-effective manner. Expertise includes implementing better approaches for facility energy systems; designing or enhancing efficiency programs; developing more environmentally friendly processes.

Specialties: Building Design/Construction, Energy Audit Services, Indoor Air Quality, Lighting Design

ETM Solar Works
Canough, Gay
1001 Union Center Maine Highway
Endicott, NY 13760-4915
Tel: 607-785-6499
Fax: 607-786-3388
info@etmsolar.com
www.etmsolar.com

Description: Design and installation of solar energy systems; residential & commercial.

Specialties: Domestic Water Heating, Photovoltaics, Wind

eVANHEE Clean Energy
Neale, David
6355 Dean Parkway
Ontario, NY 14519
Tel: 585-545-4096
Fax: 585-545-4099
contact@evanhee.com
www.evanhee.com

Description: For over 30 years the most respected installer of geothermal heating and cooling systems and over 15 years of SolarPV installation experience in Western and Central NY state. We engineer/design clean energy systems for residential & commercial heating, cooling and air quality systems (including radiant floor, and ducted air). We employ IGSHPA certified geothermal installers, and as a GeoPro Master dealer with WaterFurnace renewable energy, have fully factory trained technicians. We are a SunPower authorized dealer and installer and our team has been responsible for the design of over 200 solarPV systems in NY state. We are certified Velux Solar hot water system installers. We install and service Winspire WAVS residential/ small wind. We are a BPI accredited contractor and part of the NY Energy Star home performance program for Buffalo, Rochester, Syracuse, Oswego, Utica, Corning and Binghamton.

Specialties: Energy Audit Services, Geothermal, Photovoltaics

EvB Design
vanBeuzekom, Edrick
33 1/2 Union Square
Somer ville, MA 02143
Tel: 617-623-2222
edrick@evbdesign.com
www.evbdesign.com

Description: EvB Design provides architectural services for custom designed energy efficient housing.

Specialties: Building Design/Construction, Remodeling

Express Plumbing
Wendolowski, Mark
P.O. Box 965
Easthampton, MA 01027
Tel: 413-626-3862
mwendolowski@comcast.net
www.expressplumbing/service.net

Description: Express Plumbing is a full service plumbing, heating and solar firm serving residential and commercial accounts in Western MA, Northern CT and Southern VT.

Specialties: Radiant Heating, Solar Hot Water, Space Heating/Cooling

F.A.I. Mechanical Contractors
Iadarola, Frank
Box 1113
12 Depot Street
East Douglas, MA 01516
Tel: 508-476-1722
franki3@verizon.net

Specialties: Space Heating/Cooling

Faulkner, Nicole
10 Belmore Terrace #1
Jamaica Plain, MA 02130
Tel: 617 522 5887
nicafaulkner@earthlink.net

Specialties: Educator

Ferry Beach Ecology School
Dumsch, Andrew
8 Morris Avenue
Building 1
Saco, ME 04072
Tel: 207-283-9951
Fax: 207-283-4465
drew@fbes.org
www.fbes.org

Specialties: Environmental Education

Ferut Architects
Ferut, Joseph
401 Broad Street
Elyria, OH 44035
Tel: 440-323-9930
Fax: 440-323-9930
jferutarchitects@att.net

Specialties: Building Design/Construction

Finegold Alexander & Associates
Berry, Rebecca
77 N. Washington St.
Boston, MA 02114
Tel: 617-227-9272
Fax: 617-227-5582
rberry@faanc.com

Specialties: Consultant, Manufacturing

FACILE Plumbing and Heating
Wendolowski, Mark
P.O. Box 965
Easthampton, MA 01027
Tel: 413-626-3862
mwendolowski@comcast.net
www.expressplumbing/service.net

Description: Express Plumbing is a full service plumbing, heating and solar firm serving residential and commercial accounts in Western MA, Northern CT and Southern VT.

Specialties: Radiant Heating, Solar Hot Water, Space Heating/Cooling

F.A.I. Mechanical Contractors
Iadarola, Frank
Box 1113
12 Depot Street
East Douglas, MA 01516
Tel: 508-476-1722
franki3@verizon.net

Specialties: Space Heating/Cooling

Faulkner, Nicole
10 Belmore Terrace #1
Jamaica Plain, MA 02130
Tel: 617 522 5887
nicafaulkner@earthlink.net

Specialties: Educator

Ferry Beach Ecology School
Dumsch, Andrew
8 Morris Avenue
Building 1
Saco, ME 04072
Tel: 207-283-9951
Fax: 207-283-4465
drew@fbes.org
www.fbes.org

Specialties: Environmental Education

Ferut Architects
Ferut, Joseph
401 Broad Street
Elyria, OH 44035
Tel: 440-323-9930
Fax: 440-323-9930
jferutarchitects@att.net

Specialties: Building Design/Construction

Finegold Alexander & Associates
Berry, Rebecca
77 N. Washington St.
Boston, MA 02114
Tel: 617-227-9272
Fax: 617-227-5582
rberry@faanc.com

Specialties: Consultant, Manufacturing
Description: Sharing a collective sense of what is possible, we design projects that achieve or exceed client expectations, are environmentally responsible and are integrated into their context. We believe good design is the result of an interactive and iterative process involving all stakeholders. Rooted in Boston, our historic environment inspired our leadership role in historic preservation and adaptive reuse while shaping our thoughtful and innovative design philosophy.

The connection between old and new, historic and modern, has intrigued us since our founding. It informs our work in the reinvention of historic buildings, the creation of an addition to an existing building or the design of a new structure in an established neighborhood. We thrive on the complex, we seek exciting and innovative solutions, and we delight in the recognition that something worthwhile has been accomplished for our clients.

Specialties: Building Design/Construction

FLIR Systems
O'Toole, Tom
25 Esquire Road
North Billerica, MA 01862
Tel: 978-901-8301
tom.toole@flir.com

Description: Thermal imaging is a non-invasive, cost-efficient technology used to diagnose energy efficiency issues in buildings. Infrared inspection quickly detects electrical, structural, and other hidden problems which can impact energy efficiency.

Specialties: Energy Conservation, Home Inspections, Indoor Air Quality

Foam Form Technologies
Jones, Richard
1875 Church Road
Malvern, PA 19355
Tel: 610-350-1700
Fax: 610-296-9087
rjones@forceincconcrete.com
www.fft-icf.com

Description: Foam Form Technologies, LLC is a leading provider of LiteForm Technologies Insulated Concrete Form (I.C.F.) building systems.

Specialties: Insulation, Retail, Manufacturing

Fortress Green Building Supply
Lyden, Tim
38 Faunce Corner Road
Dartmouth, MA 02747
Tel: 508-971-1004
fortressgreenbuildingsupply@comcast.net
www.fortressgreenbuildingsupply.com


For 60% to 80% Energy Savings just from the T-Envelope.


Specialties: Alternative Technologies, Construction, Energy Conservation

Fred Davis Corporation
Davis, Fred
120 North Meadows Road
Medfield, MA 02052
Tel: 800-497-2970
fred@freddaviscorp.com
www.freddaviscorp.com

Description: Leading national independent wholesaler of all efficient lighting products. Fred: former NESEA boardmember; worked on national lamp efficiency standards; chaired first conference on lighting and energy, 1987 (a NESEA conference).

Specialties: Lighting Supply

Frontier Energy Solutions
McInerney, Conor
39 Siasconset Drive
Sagamore Beach, MA 02562
Tel: 774-413-5157
lifeisgood919@gmail.com
www.frontierenergysolutionsllc.com

Description: We serve New England, providing energy consultation, renewable energy system installation and building performance enhancements to residential and commercial properties.

Specialties: Wind, Photovoltaics, Windows

FutureMetrics
Strauss, William
8 Garden Way
Albany Township, ME 04217
Tel: 207-824-7428
williamstrauss@futuremetrics.com
www.futuremetrics.com

Description: FutureMetrics is the leading US consultant for economic impact studies for renewable energy projects. We quantify economic growth, jobs creation, and tax revenue generation.

Specialties: Biomass, Consultant, Research

G 0 Logic, LLC
Gibson, Alan
163 Moosehead Trail
Walde, ME 04915
Tel: 207-722-3079
agibson@gologichomes.com

Description: Building Design/Construction

GAI A Host Collective
Strader, Charles
P.O. Box 622
Greenfield, MA 01302
Tel: 800-672-8060 x803
sales@gaiahost.coop
www.gaiahost.coop

Description: GAI A Host provides secure and reliable Internet Hosting services as a worker-owned cooperative. We focus on efficient IT infrastructure and open source applications.

Specialties: Communications, Energy Conservation, I.T.

GDS Associates, Inc.
Bennett, Bruce
1181 Elm Street
Manchester, NH 03101
Tel: 603-656-0336
Fax: 603-656-0301
bruce.bennett@gdsassociates.com
www.gdsassociates.com/services/rees.html

Specialties: Energy Audit Services

GeoSun Design
Baker, Richard
P.O. Box 148
Turners Falls, MA 01376
Tel: 413-253-5777
rich@geosundesign.com
www.geosundesign.com

Description: Our firm specializes in the design, installation and service of geothermal HVAC energy systems for residential, commercial, and municipal applications. At GeoSun Design we are dedicated to helping you learn about geothermal energy systems and how they can help you achieve your goals. We can help you eliminate your use of gas and oil for space conditioning.

GSHPA # 18863-0209

Specialties: Geothermal, Radiant Heating, Space Heating/Cooling

Gendron Construction Services
Gendron, George
427 Cider Hill Road
York, ME 03909
Tel: 207-337-1336
Fax: 207-363-1727
gconstruct@maine.rr.com
www.gendronconstruction.com

Description: Renovation and new construction emphasizing energy efficiency. “Maine Home Performance With Energy Star” energy auditor. Retrofit insulation and weatherization.

Specialties: Building Design/Construction, Energy Audit Services, Insulation

Geoffrey H. Richon Company, Inc.
Richon, Tobias
19 Duncan Street
Gloucester, MA 01930
Tel: 978-283-6063
tsrichon@ghrichon.com
www.ghrichon.com

Description: The Geoffrey H. Richon Company specializes in delivering high quality construction, remodeling and consulting services to Cape Ann and Essex County. Our experience is based on over 35 years in residential construction and remodeling. Through a whole-system approach to design and construction, we provide our clients with a high level of energy efficiency, comfort and durability for their projects.

Specialties: Building Design/Construction, Consultant, Remodeling

Heating, Space Heating/Cooling
Go Solar, Inc.
Minnick, Gary
272 Main Road (Route 25)
Riverhead, NY 11901
Tel: 631-727-2224
Fax: 631-779-3344
gary@gosolar.com
www.gosolar.com

Description: Full service renewable energy systems designer and installer. Design and install solar electric, solar hot water, solar pool heating, and wind energy systems. We also provide training and distribute products.
Specialties: Domestic Water Heating, Photovoltaics, Wind

GotSun-GoSolar.com
Bennett, Ronald
22 Reservoir Street
Seekonk, MA 02771
Tel: 401-663-2532
rabconstructioncorp@hotmail.com
www.gotsun-gosolar.com

Description: Our mission is to promote renewable energy in MA/S. New England by providing products & services that conserve natural resources, reduce dependence on oil, & save our clients money.
Specialties: Photovoltaics, Solar Hot Water, Building Design/Construction

Gougeon & Locke
Locke, Jim
26 South Street
Williamsburg, MA 01096
Tel: 413-268-9323
Fax: 413-268-0354
glbuild@verizon.net

Description: This company is ready for any residential challenge after thirty-five years of fair dealing, careful craftsmanship, and ongoing education and enthusiasm.
Specialties: Building Design/Construction, Energy Conservation, Remodeling

Green Home Consulting, LLC
Martin, Judith
411 Theodore Fremd Avenue Suite 206
Rye, NY 10580
Tel: 914-967-2956
Fax: 914-967-2956
info@greenhomeswestchester.com
www.greenhomeswestchester.com

Description: Green home renov/construction in Westchester Co, NY & Fairfield Co, CT, incl research, sourcing & project mgmt. Work with owners of existing homes to improve energy efficiency.
Specialties: Consultant, Energy Conservation, Remodeling

Green Home Heroes, LLC
Astorina, David
95 Candor Hill
Candor, NY 13743
Tel: 607-379-9739
dave@greenhomeheroes.com
greenhomeheroes.com

Description: Green Home Heroes, LLC is a BPI (Building Performance Institute) Accredited Gold Star Contractor.
Our consulting services help homeowners understand the current condition of their home, and help navigate the choices available in renewable energy, and home energy improvement. We help make your home safer, more comfortable, and efficient.
Green Home Heroes works with best of breed partners for air-sealing and insulation, HVAC and renewable energy systems.
David Astorina is a BPI Certified Building Analyst and instructor, Level II Certified Thermographer, and member of various builders associations and trade associations.
Specialties: Consultant, Energy Audit Services, Energy Conservation

Green Machine PR
Lee, Jo
197 Ivy Street
Providence, RI 02906
Tel: 401-338-5445
jo@greenmachinepr.com
www.greenmachinepr.com

Specialties: Communications, Public Relations, Marketing

Green River Architecture
Pulfer, AIA, Donald
4 Forest Row
Great Barrington, MA 01230
Tel: 413-528-1108
donruth2@verizon.net

Description: The art of building always is an act of renovation; even the unbuilt landscape provides a context which requires understanding, acknowledgment and respect. Meaning in modern architecture resides in the successful synthesis of ideas about place, tradition, technology, and modern needs.

Green River Architecture has a rich background in renovation and restoration. We listen closely to our client’s voice and respond flexibly as our understanding develops. Balancing the program, the budget, construction techniques, energy and the environment, we work to produce an appropriate and beautiful fit between desire and reality. Attention to our clients’ needs and respect for the specifics of context are the first principles of our practice.
Specialties: Building Design/Construction, Consultant, Energy Conservation

Green Woodlands
Green, Robert
P.O. Box 330
Lyme, NH 03768
Tel: 603-643-3136
Fax: 603-285-0578
bgreen@webspec.com

Specialties: Research, Building Design/Construction, Alternative Technologies

Greene Energy Consultants, LLC
Greenbaum, Scott
40 Damon Road
Scituate, MA 02066
Tel: 781-545-1843
sgreenbaum@earthlink.net
www.greenenenergyconsultants.com

Description: Sustainable energy project development and implementation specialist (ie Commissioning) for commercial, institutional, multi-family, alternative power generation and co-gen.
Specialties: College/University, Energy Audit Services, Energy Conservation

Greener Every Day
White, Rachel
124 Hagen Road
Newton, MA 02459
Tel: 617-905-6925
rachel@greenereveryday.com
www.greenereveryday.com

Description: Greener Every Day provides green home and lifestyle consulting to help consumers make eco-friendly choices, and sustainability consulting services to help residential design and construction firms implement and leverage green building goals and practices. We also provide educational programs on green living for businesses & community groups.
Specialties: Consumer Information, Environmental Education, Remodeling

GreenSource Energy Solutions, LLC
Gamble, James
22 Pleasant Street
Concord, NH 03301
Tel: 603-856-8035
james@gessolarstore.com
www.gessolarstore.com

Description: Design, sales and installation of renewable energy solutions including solar electricity and solar hot water systems, plus a full line of conservation and high-efficiency products.
Specialties: Alternative Technologies, Green Electricity, Photovoltaics

Grenergy Solar Store, LLC
Torrico, Brian
520 Sheffield Plain Road, Route 7 Sheffield, MA 01257
Tel: 413-229-0049
info@greenerysolarstore.com
www.greenerysolarstore.com

Description: Full service retail store offering renewable energy technologies, installation services, generators, and consumer education all under one roof.
Specialties: Consumer Information, Domestic Water Heating, Photovoltaics

Grisswold Library
1 Brennan Circle
Poultney, VT 05764

Specialties: Library, Consumer Information

groSolar
Martin, Dawn
601 Old River Road
Suite 3
White River Junction, VT 05001
Tel: 802-359-6512
Fax: 802-295-4417
dawn.martin@groSolar.com
www.groSolar.com

Description: groSolar is a leading North American distributor and installer of solar energy systems for residential and commercial installations. Founded in 1998, groSolar is a mission driven company dedicated to providing high value products, systems and services that deliver peace of mind through solar energy systems and whole energy optimization.
Jeff Wolfe, groSolar’s founder, knew early on what he was destined
to do. In high school he experienced the Energy Crisis of 1973 first-hand. He decided at that point to dedicate his life’s work to renewable energy production and energy efficiency, advocacy and development. Jeff and his wife, Dori, both engineering graduates from Cornell, have developed groSolar to lead the solar industry in innovation and sound business practice.

Today, with warehouses across the United States and Canada, groSolar has the broadest solar distribution network in North America. groSolar also serves all major United States solar markets with either a company-owned installation office or a dealer-partner installation office.

Specialties: Green Electricity, Other Renewable Energy Generation, Photovoltaics

**Hammersaw Solar-EarthNet Energy**

Hellier, Ted
37 Hawthorne Lane
South Portland, ME 04106
Tel: 207-799-9222
hammersawsonar@maine.rr.com

www.hammersawsolar.com

**Description:** Hammersaw Solar is the regional distributor for EarthNet Energy, a manufacturer of solar hot water collectors. These collectors are manufactured in Chambersburg, Pa. Combined with the Vaughn Manufacturing solar water heater, these evacuated tube collectors are capable of providing large quantities of solar hot water in Northern climates.

Working with a number of highly specialized associates to customize your energy saving implementations, Hammersaw Solar is able to provide its customers with a wide range of solutions. We can help you by "Building Energy Solutions".

**Specialties:** Building Design/Construction, Energy Audit Services, Solar Hot Water

**HB Energy Solutions**

Sidd, Mitch
132 Bridge Street
Springfield, VT 05156
Tel: 802-885-2300
Fax: 802-885-4040
mitch@hbenergy.com

**Specialties:** Biomass, Photovoltaics, Solar Hot Water

**Heartwood Group, Inc.**

Unger, Fred
165 Evergreen Street
Providence, RI 02906
Tel: 401-861-1650
unger@hrtwd.com

www.heartwoodosolutions.com

**Description:** Our company was founded in 1983 to create environmentally responsible buildings. Today we provide consulting and development services in the renewable energy and building industries.

We have managed the development and operations for one of the largest owners of solar electric systems in New England, coordinated the design and federal permitting of a 3.3 MW wind project, and developed numerous innovative real estate projects.

In 2004, we founded an information technology company in the energy industry that was merged with a competitor to create the nation’s leading provider of remote monitoring of renewable energy projects. As consultants, we have helped leading firms grow their businesses and have teamed with some of the best architectural, design, engineering, construction, contracting, environmental, legal, permitting, financial and other specialists in the country on previous successful efforts and view our role as team builders and project managers as a critical part of the service we provide.

**Specialties:** Energy Conservation, Photovoltaics, Wind

**Heliotropic Technologies**

Mayhew, Michael
60 Campbell Street
Boothbay Harbor, ME 04538-0018
Tel: 207-633-1061
coolsolararguy@yahoo.com

www.heliotropictech.com

**Description:** Heliotropic Technologies is a renewable energy systems and professional energy engineering business that would like to be your energy partner.

**Specialties:** Energy Audit Services, Photovoltaics, Solar Hot Water

**Home Comfort Warehouse**

Mathewson, William
54 Bridge Street
White River JCT, VT 05001
Tel: 802-295-8778
Fax: 802-295-5211
info@homecomfortwarehouse.com

**Description:** Home Comfort Warehouse provides design and installation of both solar hot water and photovoltaic systems. Customers can visit our showroom and watch on a big screen TV just how much electricity our photovoltaic system is currently generating. We offer individual custom solar site evaluations and have over 50 biomass wood and pellet appliances on display in our downtown White River Junction Vermont showroom.

**Specialties:** Biomass, Photovoltaics, Solar Hot Water

**Home Energy Design Services**

Schunk, RA LEED AP BPI
Michael
P.O. Box 181
Thetford, VT 05074
Tel: 802-785-2574
homeenergydesignservices@gmail.com

**Description:** Energy Design Services. Providing design and building strategies around energy saving and energy producing technologies for new and existing homes.

Offering Home Energy Audits with weatherization and insulation services eligible for Efficiency Vermont and NHHSave rebate programs. Registered Architect, LEED AP, BPI Certified Building Analysis/Bldg. Shell Specialist.

**Specialties:** Building Design/Construction, Energy Audit Services, Energy Conservation

**Home Energy Remedies, LLC**

Cole, Russell
74 Pond Street
Douglas, MA 01516-2030
Tel: 508-476-0032
Fax: 508-476-1958
russ@homeenergyremedies.com

www.homeenergyremedies.com

**Description:** An unbiased and logical approach to cutting home energy costs. I analyze the home’s efficiency to help the owner create a plan that will address current needs and future plans.

**Specialties:** Consumer Information, Energy Audit Services

**Home Energy Technologies**

Harding, Peter
P.O. Box 364
Chester, CT 06412
Tel: 877-800-6440
peter@homeenergytechnologies.com

www.homeenergytechnologies.com

**Description:** Home Energy Technologies offers HERS ratings, ENERGY STAR & NGBS certification, home energy audits and other energy diagnostic services throughout Connecticut and adjoining areas.

**Specialties:** Consultant, Energy Audit Services, Energy Conservation

**Hudson Valley Community College—TEC-SMART**

Hill, Penny
345 Hermes Road
Malta, NY 12020
Tel: 518-629-7075
p.hill@hvcc.edu

**Specialties:** College/University
utilizing a wide range of sustainable technologies.

**Specialties:** Building Design/Construction, Remodeling, Space Heating/Cooling

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**Integrated Solar Applications Corp.**

Cay, Andrew
121 Spring Tree Road
Brattleboro, VT 05301
Tel: 802-257-7493
Fax: 802-257-7447
info@isasolar.com
www.isasolar.com

**Description:** Integrated Solar specializes in the design, service, and installation of renewable energy systems, including solar thermal, hydronic, photovoltaic, small wind, micro-hydro, biomass, and hybrid systems.

**Specialties:** Domestic Water Heating, Photovoltaics, Space Heating/Cooling

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**Kaplan Thompson Architects**

Thompson, Jesse
424 Fore Street
Portland, ME 04101
Tel: 207-842-2888
Fax: 207-842-2828
info@kaplanthompson.com
www.kaplanthompson.com

**Description:** Our mission is to bring beautiful, sustainable and attainable buildings to the world. From your home to your business, we can design the sustainable building you have been looking for.

**Specialties:** Building Design/Construction, Energy Conservation, Research

---

**Kasten & Company, Inc.**

Kasten, Robert
904 Stony Hill Road
Willbraham, MA 01095
Tel: 413-636-1497
Fax: 978-738-9522
robert@kastencompany.com

**Specialties:** Alternative Technologies, Retail

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**Integrated Solar Applications Corp.**

Chapin, Kyra
121 Spring Tree Road
Brattleboro, VT 05301
Tel: 802-257-7493
info@isasolar.com
www.isasolar.com

**Description:** Integrated Solar Applications Corp offers the following system technologies: Solar, Thermal Small Wind, Biomass, Photovoltaic, Geothermal

**Specialties:** Geothermal, Wind, Photovoltaics

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**Kolbert Building**

Kolbert, Dan
90 Gray Street
Portland, ME 04102
Tel: 207-799-8799
dan@kolbertbuilding.com

**Description:** Our team’s decades of experience in home construction & renovation include a strong focus on energy efficiency and sustainable design. We have significant experience with new construction, renovations, adaptive re-use, and sustainable materials/systems.

**Specialties:** Indoor Air Quality, Lighting Design, Remodeling

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**Kolbert Building**

Kolbert, Dan
90 Gray Street
Portland, ME 04102
Tel: 207-799-8799
dan@kolbertbuilding.com

**Description:** Our team’s decades of experience in home construction & renovation include a strong focus on energy efficiency and sustainable design. We have significant experience with new construction, renovations, adaptive re-use, and sustainable materials/systems.

**Specialties:** Indoor Air Quality, Lighting Design, Remodeling

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Kolbert, Dan
90 Gray Street
Portland, ME 04102
Tel: 207-799-8799
dan@kolbertbuilding.com

**Description:** Our team’s decades of experience in home construction & renovation include a strong focus on energy efficiency and sustainable design. We have significant experience with new construction, renovations, adaptive re-use, and sustainable materials/systems.

**Specialties:** Indoor Air Quality, Lighting Design, Remodeling

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**Kolbert Building**

Kolbert, Dan
90 Gray Street
Portland, ME 04102
Tel: 207-799-8799
dan@kolbertbuilding.com

**Description:** Our team’s decades of experience in home construction & renovation include a strong focus on energy efficiency and sustainable design. We have significant experience with new construction, renovations, adaptive re-use, and sustainable materials/systems.

**Specialties:** Indoor Air Quality, Lighting Design, Remodeling

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**In Site: Architecture**

Yapicioglu, Ali, Hauser, Rick
Rochester - Perry - Geneva Suite 202
Perry, NY 14530
Tel: 585-237-2614
Fax: 585-237-3679
rick@insitearch.com
www.insitearch.com

**Description:** We create innovative, site-specific solutions to every project, marrying our interest in sustainable principles to clients’ own priorities.

**Specialties:** Building Design/Construction, Green Electricity, Landscape Design/Construction

---

**Infrared Diagnostic, LLC**

Lund, Flemming
9 Elaine Road
Sudbury, MA 01776
Tel: 978-440-9900
Fax: 978-440-9902
info@infrareddiagnostic.com
www.infrareddiagnostic.com

**Description:** Infrared energy audit, Duct Blaster and Blower Door testing. Certified Infrared Thermographer, RESNET/HERS Rater. Provide consulting to builders, home owners to reduce energy.

**Specialties:** Consumer Information, Energy Audit Services, Energy Conservation

---

**Ingersoll Painting & Construction, Inc.**

Ingersoll, Jeff
1890 Niagara Street
Buffalo, NY 14207
Tel: 716-877-6502
Fax: 716-877-5900
jingersoll@ingersollpainting.com
www.ingersollpainting.com

**Description:** Solar hot water, painting and remodeling services.

**Specialties:** Building Design/Construction, Domestic Water Heating, Remodeling, Radiant Heating

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**Innovative Building & Design**

Clement, Henry
54 Porter Street
Granby, MA 01033
Tel: 413-552-9771
Fax: 413-467-3162
henry@gogtt.net

**Description:** We are a residential general contracting firm which has been designing and building energy efficient homes for 25 years

**Specialties:** Building Design/Construction, Energy Conservation, Remodeling

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**John Fulop Associates, Architects & Planners**

Fulop, John
103 East Alford Road
West Stockbridge, MA 01266
Tel: 413-232-7122, 212-219-2121
john@fulopassociates.com
www.fulopassociates.com

**Description:** John Fulop Associates, Architects provides design services for all building types, creating aesthetically pleasing, economic “green” architecture throughout the Northeast.

**Specialties:** Building Design/Construction, Energy Conservation, Remodeling

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**Keene State College**

Mason Library
P.O. Box 3201
229 Main Street
Keene, NH 03455-0001
www.keene.edu

**Specialties:** College/University

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**Kelly Taylor Interior Design**

Taylor, Kelly
460 Harris Avenue
Unit 104
Providence, RI 02909
Tel: 401-437-6363
Fax: 401-273-9559
ktaylor@ktid.net

**Description:** Residential and commercial interior design firm experienced with new construction, renovations, adaptive re-use, and sustainable materials/systems.

**Specialties:** Indoor Air Quality, Lighting Design, Remodeling

---

**Keen Mitchell, Attorney-at-Law**

Mitchell, Kate
761 Main Street
West Barnstable, MA 02668
Tel: 508-362-1369
Fax: 508-362-1368
katemitchell@comcast.net
www.katemitchellattorney.com

**Description:** Are your investments peak oil and climate change, or are they investing in solutions? Learn more at www.altenergystocks.com

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**Konrad Advising, LLC**

Konrad, Tom
121 N Quaker Hill Road
Pawling, NY 12564
Tel: 845-493-0312
DAN@kolbertbuilding.com

**Description:** Our team’s decades of experience in home construction & renovation include a strong focus on energy efficiency and sustainable design. We have significant experience with LEED for Homes.

**Specialties:** Building Design/Construction, Consultant
they part of the problem? I help individuals and institutions use their money to help deal with and profit from the pressing problems fossil fuel depletion and greenhouse gas emissions, without taking on unnecessary risk.

I also do freelance writing on the intersection of clean energy and finance.

Specialties: Finance/CPA

Klaus-Fitch Architects, Inc.
Fitch, Laura
110 Pulpit Hill Road
Amherst, MA 01002
Tel: 413-549-5799
Fax: 413-549-7918
lfitch@klausfitch.com
www.klausfitch.com

Description: Klaus-Fitch Architects was established in 2000 with the mission of working on environmentally and socially relevant projects. KFA remained at the forefront of the green design movement from this time, and also enjoys a specialty in green design movement from this time, and also enjoys a specialty in

Chojnicki, Michael
58 Skyview Drive
Callicoon, NY 12723
Tel: 845-887-4181
mchojnicki33@gmail.com

Description: architecture, planning and design studio of Catskill Region and NE Pennsylvania. Focus/direction is on sustainable design-new and renovations, alternative energy and adaptive reuse

Specialties: Alternative Technologies, Consultant, Other Renewable Energy Generation

M.L. Schmitt, Inc.
Noyes, David
P.O. Box 2070
371 Taylor Street
Springfield, MA 01101

Tel: 413-733-7868
Fax: 413-731-8819
servicecall@mlschmittelectric.com
www.mlschmittelectric.com

Description: Lighting Design, Photovoltaics

Maine Passive House
Kruse, Jesper
278 Rowe Hill Road
Greenwood, ME 04255
Tel: 207-890-3874
jesper@mainepassivehouse.com
www.mainepassivehouse.com

Description: We build and design extremely energy efficient buildings. As a Certified Passive House Consultant we do energy calculations using the PHPP software.

Specialties: Building Design/Construction, Energy Conservation, Remodeling

Malcolm & Parsons Insurance
Agency, Inc.
Parsons, David
770 Washington Street
P.O. Box 527
Stoughton, MA 02072-0527
Tel: 1-800-FORTIFY (367-8439)
Fax: 781-344-1425
dlp@malcolmandparsons.com
www.malcolmandparsons.com

Description: Guaranteed insurance and bonding provided to environmental, green, emerging technology, and building professionals throughout MA, RI, and NH. We make your insurance easy!

Specialties: Insurance

Mass Audubon
Poor, Bancroft
208 South Great Road
Lincoln, MA 01773
Tel: 781-259-2110
Fax: 781-259-8899
bpoor@massaudubon.org

Specialties: Environmental Education, Public Policy, Consumer Information

Massachusetts Clean Energy Center
Campbell, Marybeth
55 Summer Street
9th Floor
Boston, MA 02110
Tel: 617-315-9305
mcampbell@masscec.com
www.masscec.com

Description: Massachusetts is leading the way in innovative and comprehensive energy reform that will make clean energy a centerpiece of the Commonwealth’s economic future. The Green Jobs Act of 2008 created the Massachusetts Clean Energy Center (MassCEC) to accelerate job growth and economic development in the states clean energy industry. This new quasi-public agency serves as a clearinghouse and support center for the clean energy sector, making direct investments in new and existing companies, providing assistance to enable companies to access capital and other vital resources for growth, and promoting training programs to build a clean energy workforce that capitalizes on the job...
opportunities created by a vital new industry.

MassCEC is committed to leveraging Massachusetts outstanding resources in academic research, technology entrepreneurship, and workforce skills to accelerate growth of the clean energy industry. The result of these efforts will be new technologies, new companies, and a workforce ready to roll up its sleeves to ensure Massachusetts’ place as a national clean energy hub.

Specialties: Alternative Technologies, Workforce Development, Energy Education

Matrix Energy, Inc.
Wilkinson, Brian
296 Labrosse Avenue
Pointe Claire, QC H9R-5L8
Canada
Tel: 514-630-5630
Fax: 514-426-9123
bwilkinson@matrixenergy.com
www.matrixenergy.com

Description: With over 125 solar air heating projects to its credit, Matrix Energy has supplied over 400,000 ft² of solar fresh air heating collector area since 1990. These systems provided 2,331,000 CFM of ventilation air saving over 28,748 mWh in CO2 emissions by over 7608 tonnes annually.

MatrixAir&trade; TR
Designed for new construction or retrofits this patent-pending, unglazed transpired solar air heating collector resembles conventional exterior metal siding. Recommended for solar air heating systems with total fresh air flow needs of at least 3000 CFM. The transpired solar air collectors require the use of an air outlet below the mid point of the collector.

MatrixAir&trade; BP
Ideally suited for new construction with collector heights ranging from 12 – 24 ft, this backpass solar air collector delivers up to 250 CFM per module and may be connected in a combination of series and parallel configurations to address a wide variety of roof layouts or CFM requirements.

Specialties: Alternative Technologies, Photovoltaics, Space Heating/Cooling

McCausley Lyman, LLC
Winsan, Jill
10 Speen Street
Third Floor
Framingham, MA 01701
Tel: 508-665-5802
Fax: 508-665-5858
jillwians@mccausleylyman.com
www.mccausleylyman.com

Description: McCausley Lyman advises people about energy and business law and represents them in business-related transactions. We have a particular focus on the energy industry, including energy regulatory agencies, and have done a great deal of work with all aspects of developing, financing and operating independent energy projects. We help people negotiate letters of intent and contracts, arrange financings, buy and sell businesses and their assets, resolve disputes, and do the myriad other things business people (and government officials who deal with business people) need to get done in order to accomplish their business objectives.

We also welcome assignments as arbitrators and mediators. McCausley Lyman lawyers stay focused on achieving our clients’ goals. We understand the need for timeliness, cost control, and practicality. We make very sure that we are always part of the solution (and not otherwise). We keep perspective on each task as it relates to the client’s overall objectives.

We are sensitive to our responsibilities as law counselors as well as advocates. We take great care to ensure that our advice is clear and that our clients understand our reasons in giving it. Clients don’t always want to follow our advice and, when they make a different decision, we accept it and follow through on it. (Our clients don’t make illegal or unethical decisions.)

As outside counsel, our clients expect us to perform at the highest level, and we do.

Specialties: Legal

Michael Beattie Architect
Beattie, Michael
P.O. Box 1010
Middletown Springs, VT 05757
Tel: 802-235-2468
mbeattie@vermontel.net
https://sites.google.com/site/vermontgreenhome/

Description: MBA uses a personalized and collaborative process for new and renovated design projects, using energy+materials conservation, renewables, responsive sitting and healthy interiors.

Specialties: Building Design/Construction, Energy Conservation, Remodeling

Mink Hill Timber Frame Homes, Inc
Whitehead, Kyle
285 Davis Road
Bradford, NH 03221
Tel: 603-938-6219
minkhilltimberframes@gmail.com
www.minkhilltimberframes.com

Description: Building sustainable, high performance timber frame homes since 1995. Hand crafted timber framing is coupled with our personal focus on the Architect details and energy performance.

Specialties: Building Design/Construction, Insulation, Remodeling

Mount Wachusett Community College
Walsh, John
444 Green Street
Gardner, MA 01440
Tel: 978-630-9194
Fax: 978-630-9554
jdwalsh@mwdcc.mass.edu
www.mwc.cc

Specialties: College/University

Mulberry Tree Builders, LLC
Liscord, Paul
24 Old Amherst Road
Mont Vernon, NH 03057
Tel: 603-673-2603
Fax: 603-673-2603call first
pliscord@aol.com

Specialties: Building Design/Construction, Consultant

National Fiber
Hoch, Chris
50 Depot Street
Belchertown, MA 01007-9619
Tel: 413-283-8747
chris@nationalfiber.com
www.nationalfiber.com

Description: Cellulose is the only green, affordable, high-performance insulation. It is the only insulation in numerous award-winning zero net energy homes. Ideal for retrofit or new construction.

Specialties: Energy Conservation, Insulation

National Grid
Cantello, Paul
1 Metrotech Center 13th Floor
Brooklyn, NY 11201
Tel: 718-403-6963
Fax: 315-424-2166
paul.cantello@us.ngrid.com
www.nationalgrids.com

Description: National Grid (NYSE: LSE: NG; NYSE:NGG) is an international electricity and gas company and one of the largest investor-owned energy companies in the world. Our core business is the delivery of electricity and natural gas. We are committed to serving customers well, delivering energy safely and reliably, and keeping costs low.

Our vision is the long term aspiration for National Grid—what we want to be in the future: “We, at National Grid, will be the foremost international electricity and gas company, delivering unparalleled safety, reliability and efficiency, vital to the wellbeing of our customers and communities.”

“We are committed to being an innovative leader in energy management and to safeguarding our global environment for future generations.”

Specialties: Green Electricity, Consumer Information, Energy Audit Services

NC Electronics, Inc.
Ionescu, Cristian
14 Massasoit Road
Nashua, NH 03063-1310
Tel: 603-889-1938
Fax: 603-889-1938
insa@advanced-engineering.com
www.advanced-engineering.com

Description: NC Electronics, Inc. provides services as a technical consultant, product design consultant or litigation consultant, in areas involving energy efficiency and
renewable energy technologies. Specialties: Legal, Alternative Technologies, Consultant

**NEO Virtus Engineering, Inc.**
Bing, James
410 Great Road, B-6
Littleton, MA 01460
Tel: 978-952-2444
Fax: 978-952-6434
jbing@neovirtus.com
www.neovirtus.com

**Specialties:** Photovoltaics

**New Commons**
Leaver, Robert
545 Pawtucket Avenue
Suite 106A
Pawtucket, RI 02860
Tel: 401-475-6762
Fax: 401-475-6742
rleaver@newcommons.com

**Description:** New Commons is a whole new kind of think tank which helps clients move from thought to action by helping them build a network and then mobilize that network to get the job done.

**Specialties:** Consultant

**New England Breeze, LLC**
Durrenberger, Mark
7 Santos Drive
Hudson, MA 01749
Tel: 978-567-9463
Fax: 866-903-1651
mark@newenglandbreeze.com
www.newenglandbreeze.com

**Description:** New England Breeze Solar, LLC is a turn-key installer of residential and commercial Solar Systems including Photovoltaics and solar hot water. In business since 2006, we have installed over 70 systems. Our customers like our personal service and attention to detail with our quality installations. Let us help you save the planet with Sunshine and Breezes!

**Specialties:** Photovoltaics, Solar Hot Water

**New England Renewable Energy Systems**
Malloy, Edward
41 Parks Drive
Sherborn, MA 01770
Tel: 508-308-0119
Fax: 508-760-5381
edward.malloy@nerenewable.com
www.nerenewable.com

**Description:** We are here to deliver you the highest quality HVAC and renewable energy systems, for the lowest, most predictable energy costs possible.

**New England Renewable Energy Systems** has a single mission to serve our customers by enabling the lowest most predictable energy costs possible and in many cases an off-grid, zero-carbon energy status for residential and commercial applications in Boston Massachusetts, on Cape Cod and all of New England. Importantly, our world-class, seasoned staff understands the same renewable technology solution is not necessarily appropriate for every circumstance and more often an integration of technologies is the most valuable, effective, and community sensitive.

**Specialties:** Geothermal, Photovoltaics, Wind

**New England Solar & Green Solutions**
Guntlow, Andrew
55 North Street
Williamstown, MA 01267
Tel: 413-458-4966
Fax: 413-458-2712
andrewg@nesolargreenandconstruction.com
www.nesolargreen.com

**Description:** Specializing in renewable energy & energy conservation, we offer extensive design & construction experience & use the latest products & techniques to ensure the highest standards.

**Specialties:** Alternative Technologies, Energy Conservation, Photovoltaics

**New England Sustainable Homes, Inc.**
Ouellet, David
139 Butman Road
Lowell, MA 01852
Tel: 978-337-0776
deo@newenglandsustainablehomes.com
newenglandsustainablehomes.com

**Specialties:** Building Design/Construction, Alternative Technologies

**New Tapestry, LLC**
Anway, Randall
P.O. Box 4066
Old Lyme, CT 06371-1815
Tel: 203-623-3156
randy@new-tapestry.com
www.new-tapestry.com

**Description:** New Tapestry, LLC offers design-oriented support for ecologically and community-minded clients. Principal Randall Anway is a Registered Architect (CT and NY, NCARB).

**Specialties:** Building Design/Construction, Consultant, Research

**New York State Energy Research and Development Authority (NYSERDA)**
17 Columbia Circle
Albany, NY 12203-6399
Tel: 1-866-NYSERDA
Fax: 518-862-1091
info@nyserva.org
www.nyserva.org

**Description:** NYSERDA offers objective information and analysis, innovative programs, technical expertise, and funding to help New York businesses and residents increase energy efficiency, save money, use renewable energy, and reduce their reliance on fossil fuels. NYSERDA professionals work to protect our environment and create clean-energy jobs. A public benefit corporation, NYSERDA has been developing partnerships to advance innovative energy solutions in New York since 1975. NYSERDA strives to facilitate change through the widespread development & use of innovative technologies to improve the State’s energy, economic, & environmental well-being. NYSERDA is committed to public service, striving to be a model of efficiency and effectiveness, while remaining flexible & responsive to its customers’ needs. NYSERDA’s programs & services provide a vehicle for the State to work collaboratively with businesses, academia, industry, the federal government, environmental community, public interest groups, and energy market participants. Through these collaborations, NYSERDA seeks to develop a diversified energy supply portfolio, improve market mechanisms, & facilitate the introduction & adoption of advanced technologies that will help New Yorkers plan for & respond to uncertainties in the energy markets. To learn more about NYSERDA programs and funding opportunities visit www.nyserva.org.

**Specialties:** Alternative Technologies, Consumer Information, Research

**Newport Solar**
Sabetti, Doug
14 Vernon Avenue
Newport, RI 02840
Tel: 401-787-5682
doug@newportsolarri.com
www.newportsolarri.com

**Description:** Newport Solar is a full service provider of solar energy systems specializing in the design and installation of solar electric systems.

**Specialties:** Photovoltaics

**Nexamp, Inc.**
Dahl, Emily
21 High Street, Suite 209
North Andover, MA 01845
Tel: 978-688-2700
edahl@nexamp.com
www.nexamp.com

**Description:** Nexamp is a leading provider of renewable power and clean energy solutions. The company has delivered over 300 successful energy projects ranging from utility-scale solar photovoltaic installations to comprehensive clean energy master plans. With a unique combination of energy project finance, design, construction, and operations experience, coupled with expertise in technologies, markets, and policy, Nexamp makes clean energy simple and profitable for our clients and partners.

**Specialties:** Photovoltaics, Consultant, Alternative Technologies

**Nexamp, Inc.**
McClintock, Scott
21 High Street, Suite 209
North Andover, MA 01845
Tel: 978-688-2700
Fax: 978-416-2525
smclintock@nexamp.com
www.nexamp.com

**Description:** Nexamp provides clean energy services & solutions for business & government in the Northeast: energy assessments; solar, geothermal, efficient lighting, wind, & more.

**Specialties:** Energy Audit Services, Geothermal, Photovoltaics
North East Green Initiative, LLC
Warren, Matt
3 Garfield Avenue
Rumford, RI 02916
Tel: 401-699-7369
matt@northeastgreen.net
www.northeastgreen.net
Specialties: Photovoltaics, Solar Hot Water

Northern Manhattan Improvement Corp
Rieber, Daniel
76 Wadsworth Avenue
New York, NY 10023
Tel: 212-822-8340
danrierbe@nmic.org
Description: NMIC is a community-based, nonprofit organization founded in 1979 that serves Washington Heights and Inwood, in upper Manhattan. Beginning with two people operating on a small start-up grant, we have grown over the past 30 years to over 100 staff members, working to stabilize the community and help residents build a better life. We achieve this by preserving affordable housing through legal services, community organizing, and building weatherization; by promoting economic self-sufficiency through adult education and workforce development; and by stabilizing families through social services, health education, and domestic violence intervention. From its inception, NMIC has worked hard to empower our community’s poorest residents through education, training, organizing, and support.
Specialties: Consultant, Communications, Consumer Information, Social Services

NorthEast Solar Design Associates
Bronner, Ann
136 Elm Street
Hatfield, MA 01038
Tel: 413-247-6045
info@northeastsolar.com
http://www.northeastsolar.com
Description: Northeast Solar, East Greenwich, Rhode Island: offering your home/business Solar Systems to provide you with renewable energy.
Specialties: Alternative Technologies, Energy Audit Services, Solar Hot Water

NSTAR
1 NSTAR Way, SW360
Westwood, MA 02090
Tel: 800-592-2000
Fax: 781-441-8855
roseann.brusco@nstar.com
www.nstar.com
Description: NSTAR is the largest Massachusetts-based, investor-owned electric and gas utility, with revenues of approximately $3.3 billion and assets totaling approximately $8.3 billion. NSTAR transmits and delivers electricity and gas to 1.1 million electric customers in 81 communities and nearly 300,000 gas customers in 51 communities. NSTAR employs more than 3,200 employees in its regulated business. NSTAR is committed to conducting its business in a way that least impacts the environment. We’re always looking for new and different ways to meet that commitment. It’s all part of our mission of delivering great service to our customers. At NSTAR we’re proud of our two decade tradition of offering our customers energy efficiency programs, and moving to further demonstrate our commitment to deliver great service by providing customers with information and tools to help them take part in improving our environment.
In the past five years alone, NSTAR’s Energy Efficiency programs have helped customers save 6.5 million therms of natural gas and 800,000 megawatt hours of electricity. This is the equivalent of reducing carbon dioxide emissions by half a million tons. Such programs are available to both electric and gas customers, and designed to not only save on your monthly energy bill, but also help the environment.
Specialties: Energy Audit Services, Green Electricity, Other Renewable Energy Generation

O’Hara Builders, Inc.
O’Hara, Brendan
21 Candle Pine Circle
East Falmouth, MA 02536
Tel: 508-457-1688
Fax: 508-457-1688
oharabldrs@comcast.net
www.oharabuilders.com
Description: Specializing in energy efficient custom remodeling, O’Hara Builders provides total client satisfaction. We provide full sustainable construction services in the Boston and upper Cape Cod areas.
Specialties: Building Design/Construction, Energy Conservation, Remodeling

October Engineering Associates, LLC
Morrison, Robert
16 October Road
Sudbury, MA 01776
Tel: 508-561-7553
rlm@octoberengineering.com
Specialties: Engineering Services
Olga Kahn
Kahn, Olga
30 Marsh View
Wellfleet, MA 02667-6948
Tel: 508-349-0997
Fax: by appt
olgakahn@comcast.net
Description: Architectural services, owner’s rep, construction supervision. Specializing in reuse of existing structures; modular construction. Arch Lic #7382 & CSL #B6402. SOMWBA-certified.
Specialties: Building Design/Construction, Lighting Design, Remodeling

ONTILITY
Eiben, Nicole
3403 N Sam Houston Parkway W Suite 300
Houston, TX 77086
Tel: 281-854-1400
nicole.eiben@ontility.com
www.ontility.com
Description: ONTILITY Services - Professional development & certification training; stocking warehouse at competitive prices; full range of support, financial and consultive services.
Specialties: Consultant, Photovoltaics, Solar Hot Water

Optimal Energy Solutions, LLC
Spindler, Henry
64 Peg Shop Road
Keene, NH 03431
Tel: 603-283-0366
Fax: 603-283-0366
hcs@optimalenergysolutions.net
Description: Comprehensive building system analysis and design, including: building envelope, high-efficiency HVAC (esp. hydronic), customized control systems and renewable energy.
Specialties: Biomass, Radiant Heating, Space Heating/Cooling

PAH Associates
Horowitz, Paul
9 Quorn Hunt Road
Simsbury, CT 06092
Tel: 860-658-9506
pahorowitz@earthlink.net
Description: Provides management and regulatory consulting services to institutions, businesses, and individuals to support their consideration and implementation of energy efficiency, renewables, green electricity purchases, and overall sustainable strategies.
Specialties: Energy Conservation, Public Policy, Research

Panich + Noel Architects
Panich, David
1153 Grove Street Framingham, MA 01701
Tel: 740-591-9901
dpanich@pnarch.com
pnarch.com
Description: David Panich, AIA, LEED AP is a registered architect with experience on a wide variety of project types. He specializes in sustainable and energy efficient designs.
Specialties: Building Design/Construction, Energy Conservation, Remodeling

Partners For Architecture
Grasso, Stephen
48 Union Street
Stamford, CT 06906
Tel: 203-708-0047
Fax: 203-348-4165
studio@pfarch.net
www.pfarch.net
Description: Full service architectural firm providing healthy, sustainable and low energy design solutions in commercial and residential construction. Principals: Kevin Davignon and Rainer Schrom, LEED AP
Specialties: Building Design/Construction

Partners for Architecture
Grasso, Stephen
48 Union Street
Bldg. 1
Stamford, CT 06906
Tel: 203-708-0047
Fax: 203-348-4165
lagrasso@pfarch.net
www.pfarch.net
Description: After a combined 75 years of working for many successful organizations, Partners For Architecture Inc. was inaugurated in 1999 with the dedication to establish an architectural firm that provides comprehensive and environmentally sensitive architectural services.
The very foundation of Partners for Architecture is the desire to create a built environment that is respectful to its surroundings and does not view our planets resources as ‘being there for the taking’. From a conference table built from scrap steel to an office space exposing beautiful natural materials prevously hidden by our society’s habits, the environment is not something we talk about, it is something about which we care passionately and reinforce in our own office space.
Beyond the environment, our ‘workshop’ is one which eliminates the common “chain of commands” found in large firms, our organization is known for a fresh, uncomplicated and straight-forward hands-on approach, with a principal completely involved in every aspect of your project.
Specialties: Building Design/Construction, Energy Conservation

Paul Huijing, Inc. Construction and Engineering
Huijing, Paul
P.O. Box 516
Wilbraham, MA 01095
Tel: 413-599-4884
Fax: 413-599-4884
phinc@charter.net
www.paulhuijing.com
Description: Paul Huijing founded Paul Huijing, Inc. Construction and Engineering with a goal of establishing a small personal construction company with time to focus on the individual needs of his clients. Paul stresses sustainable projects with lasting value. His commitment to efficiency, organization, responsiveness, and knowledge make the company unique. An organized professional approach makes life easier/less stressful for customers. Quality scheduling and construction are a powerful combination for customers. A realistic completion date enables you to accurately plan your move-in date.
Keywords: Residential construction, super insulation, Energy Star, new homes, remodeling, energy conservation
Specialties: Building Design/Construction, Insulation, Remodeling

Petersen Engineering, Inc.
Petersen, James, P. E.
P.O. Box 4774
Portsmouth, NH 03802
Tel: 603-436-4233
james@petersenengineering.com
www.petersenengineering.com
Description: Petersen Engineering provides green consulting services in the areas of HVAC, plumbing, fire protection and building envelope for commercial, residential and industrial buildings.

Specialties: Building Design/Construction, Energy Conservation, Space Heating/Cooling

Petra Schweitzer Translations
Schweitzer, Petra
18 Woodside Ridge
Greenfield, MA 01301
Tel: 413-325-1875
Fax: 866-378-8230
petra@petraschweitzer.com
www.peteraschweitzer.com
Description: English to German and German to English technical document translation in the fields of Renewable Energy and Energy Efficiency.
Specialties: Translation

Philippe Campus Architect, LLC
Campus, Philippe
202 South Motowese Street
Branford, CT 06405
Tel: 203-483-0468
phcarchitect@snet.net
www.geosolararchitect.com
Specialties: Alternative Technologies, Building Design/Construction, Remodeling

Phinney Design Group
Phinney, Michael
142 Grand Avenue
Floor 3
Saratoga Springs, NY 12866
Tel: 518-587-7120
Fax: 518-587-7250
info@phinneydesign.com
www.phinneydesign.com
Description: Phinney Design Group (PDG) is a multi-disciplinary Architecture, Interior Design, and Green Building Consulting firm with a focus on sustainable and environmentally sensitive construction methods.
We make it easy to be green... Beyond the environment, our ‘workshop’ is one which eliminates the common “chain of commands” found in large firms, our organization is known for a fresh, uncomplicated and straight-forward hands-on approach, with a principal completely involved in every aspect of your project.
Specialties: Building Design/Construction, Energy Conservation

Paul Huijing, Inc. Construction and Engineering
Huijing, Paul
P.O. Box 516
Wilbraham, MA 01095
Tel: 413-599-4884
Fax: 413-599-4884
phinc@charter.net
www.paulhuijing.com
Description: Paul Huijing founded Paul Huijing, Inc. Construction and Engineering with a goal of establishing a small personal construction company with time to focus on the individual needs of his clients. Paul stresses sustainable projects with lasting value. His commitment to efficiency, organization, responsiveness, and knowledge make the company unique. An organized professional approach makes life easier/less stressful for customers. Quality scheduling and construction are a powerful combination for customers. A realistic completion date enables you to accurately plan your move-in date.
Keywords: Residential construction, super insulation, Energy Star, new homes, remodeling, energy conservation
Specialties: Building Design/Construction, Insulation, Remodeling

Petersen Engineering, Inc.
Petersen, James, P. E.
P.O. Box 4774
Portsmouth, NH 03802
Tel: 603-436-4233
james@petersenengineering.com
www.petersenengineering.com
Description: Petersen Engineering provides green consulting services in the areas of HVAC, plumbing, fire protection and building envelope for commercial, residential and industrial buildings.

Specialties: Building Design/Construction, Energy Conservation, Space Heating/Cooling

Petra Schweitzer Translations
Schweitzer, Petra
18 Woodside Ridge
Greenfield, MA 01301
Tel: 413-325-1875
Fax: 866-378-8230
petra@petraschweitzer.com
www.peteraschweitzer.com
Description: English to German and German to English technical document translation in the fields of Renewable Energy and Energy Efficiency.
Specialties: Translation

Philippe Campus Architect, LLC
Campus, Philippe
202 South Motowese Street
Branford, CT 06405
Tel: 203-483-0468
phcarchitect@snet.net
www.geosolararchitect.com
Specialties: Alternative Technologies, Building Design/Construction, Remodeling

Phinney Design Group
Phinney, Michael
142 Grand Avenue
Floor 3
Saratoga Springs, NY 12866
Tel: 518-587-7120
Fax: 518-587-7250
info@phinneydesign.com
www.phinneydesign.com
Description: Phinney Design Group (PDG) is a multi-disciplinary Architecture, Interior Design, and Green Building Consulting firm with a focus on sustainable and environmentally sensitive construction methods.
We make it easy to be green...
practicable or simply utilizing only the minimum “common sense” approach to green design, we can supply the necessary information to make an educated decision when investing in sustainable building practices.

PDC has worked closely with city planning officials throughout the development of various architectural projects from single family residences in historic districts to multi-use urban infill development. The firm has a long track record of designing and coordinating through construction the completion of environmentally friendly homes, commercial offices, and retail spaces. Visit us on the web @ www.phinneydesign.com

Specialties: Building Design/Construction, Remodeling, Research

Phinney Design Group

Phinney, Michael
142 Grand Avenue
Saratoga Springs, NY 12866
Tel: 518-587-7120
Fax: 518-587-7250
info@phinneydesign.com
www.phinneydesign.com

Description: Phinney Design Group is a multi-disciplinary Architecture, Interior Design and Green Building Consulting firm with a focus on sustainable and environmentally sensitive construction methods.

Specialties: Building Design/Construction, Interior Design, Consultant

Picton Brothers, LLC
Picton, Jim
P.O. Box 438
10 Titus Road
Washington Depot, CT 06794
Tel: 860-868-5007
info@pictonbrothers.com
www.pictonbrothers.com

Description: We are a construction & general contracting co. interested in progressive projects that incorporate practical & pleasing design geared to long-term sustainable use of resources.

Specialties: Building Design/Construction, Remodeling

Pinkham Building & Solar Services
Pinkham, Chris
P.O. Box 1419
507 County Road
 Hillsboro, NH 03244-1419
Tel: 603-464-5821
Fax: 603-464-5821
cp_info@mcttelecom.com

Description: We design, sell, install and service Sunda Solar domestic hot water systems throughout New Hampshire. Teach the solar workforce program at Lakes Region Community College.

Specialties: Consumer Information, Domestic Water Heating, Remodeling

Polanik Architects
Polanik, Gregory
6 Pine Cone Drive
East Sandwich, MA 02537
Tel: 508-833-6540
mr7b7@aol.com
www.polarch.com

Description: Specializing in environmentally appropriate architecture, planning, & consulting, we strive to design efficient, healthy buildings that preserve the local community.

Specialties: Building Design/Construction, Energy Conservation, Remodeling

Polar Solar
Smith, Cecil
151 Benton Road
North Haverhill, NH 03774
Tel: 603-787-2257
polarsolear1@yahoo.com
www.polarsolearnh.com

Description: Polar Solar, NH will strive to offer affordable options for energy efficiency and energy independence in homes and businesses by reducing or eliminating the need for fossil fuel use through design and installation of integrated energy efficient and renewable energy systems such as: solar electricity and solar hot water, rainwater collection and storage, composting toilets and composting.

Specialties: Solar Hot Water, Photovoltaics, Energy Conservation

Precision Decisions, LLC
Vreeland, Chris
P.O. Box 746
Otis, MA 01253
Tel: 413-269-4965
vreeland67@msn.com

Description: Providing engineering services for renewable energy conservation and green construction. We service contractors, architects and directly to industry, commercial and residential clients. Professional Engineering licensed in MA, CT, NY, RI.

Specialties: Alternative Technologies, Consultant, Photovoltaics, Energy Conservation

Price Sustainability Associates, Inc.
Price, Mark
28 Walnut Street
Maynard, MA 01754
Tel: 978-760-2723
pricesustainability@me.com

Description: PSA offers consulting for energy efficiency, and Green Building Rating Systems, including LEED for Homes, for residential and multi-family clients throughout New England.

Specialties: Consultant, Energy Audit Services, Energy Conservation

Public Service of New Hampshire
Lemay, Gary
P.O. Box 330
Manchester, NH 03105-0330
Tel: 603-634-3500
lemaygs@nu.com
www.psnh.com

Specialties: Green Electricity, Consumer Information, Alternative Technologies

PV Squared
Stillinger, Bill
324 Wells Street
Greenfield, MA 01301
Tel: 413-772-8788
bills@pvsquared.coop
www.pvsquared.coop

Description: PV Squared is a worker-owned cooperative dedicated to making our shared community a better place to work and live. We are based out of two offices in western Massachusetts and central Connecticut. Our organization is committed to the highest quality service for you, while providing jobs at fair wages in our community. We are eager to move toward a sustainable society by learning and adapting to new circumstances in ways that nurture and restore, rather than harm, natural systems.

We’re a local company operating year round; PV Squared is here to help you to own and maintain your renewable energy systems. We provide advice, equipment and assistance.

Specialties: Photovoltaics, Solar Hot Water, Wind

R.H. Irving Co., Inc.
Irving, Bob
543 West Salisbury Road
Salisbury, NH 03268
Tel: 603-648-2635
Fax: 603-648-6470
rhirving@tds.net
www.rhiringhomebuilders.com

Description: Over 37 years of comfortable sunny homes. High Performance, Superinsulated, homes & renos; last home HERS: 52, air change 1.6 @50 pascals. Certified Passive House Consultant

Specialties: Building Design/Construction, Remodeling

R.L. Benton — Builder
Benton, Rich
154 Schoolhouse Road
Center Sandwich, NH 03227
Tel: 603-284-6860
Fax: 603-284-6860
rlbenton@cyberpine.net

Description: Full service builder/designer for energy-efficient residential construction in the NH lakes region. Timber-framing as well as advanced hybrid construction, with expertise in solar thermal system design and installation since 1978. Our Sandwich Cabinet Shop can furnish your project as well.


Ra Solar Company
Vann, Jim
P.O. Box 512
Waitsfield, VT 05673-3222
Tel: 802-496-9496
yimbo98@gmavt.net

Description: Builders of energy efficient, solar, green homes, additions, and renovations since 1978. We can provide complete design/build services to our clients. We also offer green project consulting, plans modification, and specifications writing.

Specialties: Building Design/Construction, Energy Audit Services, Indoor Air Quality

Re:Vision Architecture
Kelly, Scott
133 Grape Street
Philadelphia, PA 19127
Tel: 215-482-1133
young@revisionarch.com
www.revisionarch.com

Description: Named Best Green Architect by Philadelphia Magazine and Sustainable Design Leader by PA Environmental Council, Re:Vision...
Architecture is a deep green architecture and sustainability/LEED consulting practice that was founded in 2001 to specialize exclusively in green building projects that take less from the planet (fewer natural resources, less pollution) and give more to people (more daylight, comfort, health, beauty, prosperity).

As an early adopter of sustainable design, Re:Vision has an extensive portfolio of completed work that represents the following key services:

- Architectural design for projects that range from common sense green to cutting-edge sustainable design
- LEED/sustainability technical consulting and management for designers, contractors, and owners
- Green operations and maintenance implementation
- Professional green design charrettes
- Sustainability-related education
- Green behavior change projects targeting building users
- Sustainability research and policy development
- Fundraising for Green Buildings
- Indoor Air Quality Testing

Behind the projects and the firm, Re:Vision is comprised of friendly people who are passionate about sustainability and community.

Specialties: Building Design/Construction, Consultant, Environmental Education

Recycled Paper Printing
Truesdale, Todd
12 Channel Street
Suite 603
Boston, MA 02210
Tel: 617-737-9911
todd@recycledpaper.com

Description: Recycled Paper Printing is the nation’s oldest “green” printer. Founded in 1983, we specialize in sustainable printing using certified recycled papers, soy-based inks, and 100% certified wind-energy credits. We also produce an extensive line of sustainable ad specialty items.

Specialties: Environmental Education, Marketing, Publishing

Renewable Sales LLC
Price, Kevin
16 Everett Street
Holliston, MA 01746
Tel: 508-309-4437
Fax: 508-302-1070
kprice@renewablesales.com
www.renewablesales.com

Description: Renewable Sales, LLC provides contractors with photovoltaic, solar thermal, and geothermal products for residential and commercial use.

Specialties: Domestic Water Heating, Geothermal, Photovoltaics

Reno Engineering and Light Design
Reno, Victor
Reno Road
HCR32 Box 729
Marlow, NH 03456-9708
Tel: 603-446-3426
Fax: 603-446-3731
renoengineering@earthlink.net

Description: Architectural lighting design, energy-conscious lighting, and energy conservation. Also full electrical engineering services.

Specialties: Energy Conservation, Lighting Design

Renovus Energy, Inc.
Weaver, Arthur
102 Cherry Street
Ithaca, NY 14850
Tel: 607-277-1777
Fax: 607-277-1277
art@renovusenergy.com
renovusenergy.com

Description: Design, installation of renewable energy systems, commercial and residential, solar electric, solar thermal, wind, hydro. NABCEP-certified. NYSDER ignition.

Specialties: Domestic Water Heating, Photovoltaics, Wind

Richard Renner Architects
Renner, Richard
35 Pleasant Street
Portland, ME 04101
Tel: 207-773-9699, 508-651-2385
Fax: 207-773-9599
rrrenner@rrrennerarchitects.com
www.rrrennerarchitects.com

Description: Environmentally responsible design is a cornerstone of our architectural practice.

Specialties: Building Design/Construction

Ridgeview Construction
Carter, Shane
43 North Road
Suite 303
Deerfield, NH 03037
Tel: 603-303-7206
scarter@ridgeview-construction.com
www.ridgeview-construction.com

Description: How we choose to build and renovate our homes is one of the most significant ways we impact our future. Businesses and homeowners vote with every dollar they spend - to fuel the global carbon footprint or build greener homes that improve quality of life today and tomorrow.

Ridgeview Construction goes beyond the construction phase to account for the complete Home Life Cycle. By harmonizing the intricate systems within the home and property, we minimize the impact on the environment and produce a healthier, more efficient home.

Best of all, we do this using local resources and our award-winning custom design. A Ridgeview home is a beautiful, healthy, high-performance home.

Ridgeview is committed to leading the way in sustainable development practices. Through education and leading by example, we envision a future where the standards for building sustainably are no longer the exception, but the rule.

Specialties: Building Design/Construction, Insulation, Remodeling

RJ Franey Mechanical Services, Inc.
Franey, Robert
56-A Nicoletta’s Way
 Mashpee, MA 02649
Tel: 508-539-8668
Fax: 508-539-8665
rjfraney@comcast.net
www.rjfraney.com

Description: R. J. Franey Mechanical Services is a customer focused heating and air-conditioning company that was originally started in 1996. Located in Mashpee, MA, we employ highly trained people whose goal is to make our company the best service company in Cape Cod Area.

Our company specializes in designing, engineering, and installing complete comfort systems for owners of existing homes and buildings just like yours. We take special pride in the craftsmen we train and employ -- a fact you’ll notice immediately in the attitude and integrity they bring to your job site.

Our entire company works hard to make your experience with us hassle-free and enjoyable. Should we make a mistake, we will do everything in our power to correct it to your satisfaction.

Specialties: Domestic Water Heating, Space Heating/Cooling, Alternative Technologies, Engineering Services

Robert L. Spencer, AICP — Environmental Planning Consultant
Spencer, Robert
15 Christine Court
Vernon, VT 05354
Tel: 978-479-1450
Fax: 802-254-9607
spencebbc@aol.com

Description: Professional planner specializing in organic waste management & project development. Assessment of on-site & off-site recycling of food waste, manure, yard waste & biosolids.

Specialties: Other Renewable Energy Generation, Research

Royer Architects
Royer, Chris
237 Tremont Street
Newton, MA 02458
Tel: 617-244-4477
chris@royerarchitects.com
www.royerarchitects.com

Description: Environmentally sensitive residential work in the New England region is our specialty. We enjoy the collaborative process of working with a client and their contractor to bring ideas to fruition.

Specialties: Building Design/Construction, Energy Conservation, Landscape Design/Construction

RST Thermal
Hickey, Mary Ellen
372 University Avenue
Westwood, MA 02090
Tel: 781-320-9910
Fax: 781-320-9906
mehickey@rstreps.com

Specialties: Building Design/Construction, Energy Conservation, Space Heating/Cooling
and institutional clients the firm is committed to sustainable design practices; focusing on working closely with our clients to design thoughtful, innovative, healthy and energy-efficient places to live and work.

**Specialties:** Building Design/Construction

### Sasaki Associates
Elbaum, Meredith
64 Pleasant Street
Watertown, MA 02472
Tel: 617-926-3300
www.sasaki.com

**Description:** Green design is good business. Understanding and addressing environmental concerns are hallmarks of the work of our firm. We advance the limits of green design with innovative, interdisciplinary design concepts through planning and urban design, landscape architecture, architecture, interior design, eco-technologies, graphic design and strategic planning.

**Specialties:** Building Design/Construction, Landscape Design/Construction, Interior Design

### Schneider Electric Energy Solutions
Ventresca, Fred
23 Yogananda Street
Sandy Hook, CT 06482
Tel: 203-788-0894
fred.ventresca@buildings.schneider-electric.com

**Description:** Today, energy is at the heart of everyone’s concern. More than ever, the current situation compels each and every one to achieve more while using fewer resources. Have you ever dreamed of improving your bottom line while consuming less energy and without a power outage? Global specialist in energy management, Schneider Electric can help. We make energy safe, reliable, efficient, productive and green. How? Simply by making energy visible and giving you the means to act to optimize its consumption.

**Specialties:** Energy Conservation, Alternative Technologies, Manufacturing

### Seacoast Energy Alternatives, Inc.
(SEA Solar Store)
Bingham, Pamela
187 New Rochester Road
Dover, NH 03820
Tel: 603-749-9550
Fax: 603-749-9551
pam@seasolarstore.com
www.seasolarstore.com

**Description:** Solar store providing domestic and commercial alternative energy options plus items to improve conservation measures in the home and business. Commercial solar hot water systems for hotels, schools and industry.

**Specialties:** Domestic Water Heating, Photovoltaics, Wind

### Seaside Solar Design/Builders
Mello, Stephen
1 Farrell Court
West Wareham, MA 02576
Tel: 508-295-8214
seasidesolar@comcast.net

**Description:** Work in the practice of sustainability since 1981. Providing clients affordable design and construction services and achieving successful energy efficient new homes, renovations and additions to existing buildings.

**Specialties:** Building Design/Construction, Domestic Water Heating, Remodeling, Space Heating/Cooling

### Second Generation Energy
Whitaker, Edward
11 Rosenfeld Drive
Hope Dale, MA 01747
Tel: 800-653-4270
Fax: 508-275-8541
info@secondgenerationenergy.com

**Description:** We are an experienced solar photovoltaic installer offering personalized service combined with the highest industry credentials. We also provide SREC aggregation and marketing.

**Specialties:** Green Electricity, Photovoltaics, Solar Hot Water

### Sells Lars Lathrop Architects, LLC
Lathrop, Ann
1 Kings Highway North
Westport, CT 06880
Tel: 203-222-0229
ann@sla-arch.com
www.sla-arch.com

**Description:** Small, woman-owned firm designing upgrades, additions and renovations for 21st century liv-

### Shift Energy, LLC
Dunn, Michael
88 Airport Drive, Suite 200
Rockingham, NH 03867
Tel: 603-817-7103
mick@shiftnergy.com
www.shiftergy.com

**Description:** Specializing in Solar Hot Air, Solar hot Water and Project Management in ME, NH, VT, MA, CT, RI and internationally.

**Specialties:** Solar Hot Water, Photovoltaics, Space Heating/Cooling

### Siemens Industry – Building Technologies Division
Drummond, Jerry
40 Sharpe Drive
Cranston, RI 02920
Tel: 401-225-5432
Fax: 781-575-9590
jerry.drummond@siemens.com

**Specialties:** Energy Monitoring, Building Design/Construction, Energy Conservation

### SJ Environmental Consulting, LLC
Pick, Sally
PO Box 303
Montague, MA 01351
Tel: 413-367-0082
sjp@crocker.com

**Description:** Offering a range of services including writing (i.e. news releases, policy papers, & grants); managing projects & collaborations; and directing public education programs.

**Specialties:** Communications, Consumer Information, Environmental Education

### Slater Technology Fund
Sparkman, Thorne
3 Davol Square
Suite A301
Providence, RI 02903-4762
Tel: 401-831-6633
nancy@slaterfund.com
www.slaterfund.com

**Specialties:** Finance/CPA, Alternative Technologies
Solar & Wind FX, Inc.
Schaefer, Chris
5115 South Hill Road
Canandaigua, NY 14424
Tel: 585-229-2083
chris@solarandwindfx.com
www.solarandwindfx.com
Specialties: Building Design/Construction, Green Electricity, Photovoltaics

Solar Components Corporation
Keller, Scott
121 Valley Street
Manchester, NH 03103
Tel: 603-668-8186
Fax: 603-668-1783
skeller@solar-components.com
www.solar-components.com
Description: Your supply source for active and passive solar systems and components since 1973. Catalog online. Over 100 products. Retail store open M-F 8AM-4:30PM
Specialties: Energy Conservation, Photovoltaics, Solar Hot Water

Solar Frontier Americas, Inc.
Rolufs, Peter
3945 Freedom Circle
Santa Clara, CA 95054
Tel: 408-916-4150
www.solar-frontier.com
Description: Solar Frontier is the world’s largest and fastest-growing manufacturer of CIS thin-film photovoltaic modules. We combine proven technology, gigawatt-scale production capacity and world-record conversion efficiencies to offer more kilowatt hours at greater dependability. Our mission is to create the most economical, ecological solar energy solutions on Earth - on the world’s largest scale. We operate in the US through our Solar Frontier Americas Inc. sales office.
Specialties: Manufacturing, Photovoltaics, Research

Solar Installation, LLC
Gaydou, Roger
83 Ames Street
Brockton, MA 02302
Tel: 888-376-5271
service@solarinstallco.com
www.solarinstallco.com
Description: Solar Installation LLC is a full service solar energy con-...
(**Spector Associates Architects**

Spector, Alan  
19 Fox Hill Road  
Lafayette, NJ  07848  
Tel: 973-702-0309  
Fax: 206-333-1986  
spectorarch@earthlink.net  
www.spectorarch.com  
**Description:** Since 1974 we have provided SUSTAINABLE BUILDING SOLUTIONS—designs include energy modeling, passive solar, solar PV & hot water, geothermal, daylighting & energy recovery.  
**Specialties:** Building Design/Construction, Energy Audit Services, Energy Conservation

**Stein Consulting**

Stein, Craig  
P.O. Box 1000  
Putney, VT  05346  
Tel: 802-387-4748  
cstein@sover.net  
**Specialties:** Engineering Services, Consultant, Alternative Technologies

**Stephen Greenleaf Architect**

Greenleaf, Stephen  
P.O. Box 16612  
Rumford, RI  02916  
Tel: 401-434-8200  
Fax: 815-572-0498  
stephen@sgreenleaf.com  
www.sgreenleaf.com  
**Description:** We are a full service Architectural Firm with an interest in small projects. We assist our clients in integrating sustainable elements into their new or existing projects.  
**Specialties:** Building Design/Construction, Energy Conservation, Other Renewable Energy Generation

**Stephen Tilly, Architect**

Tilly, Stephen  
22 Elm Street  
Dobbs Ferry, NY  10522  
Tel: 914-693-8898  
Fax: 914-693-4235  
officestillyarchitect.com  
www.stillyarchitect.com  
**Description:** Sustainable architecture, planning, landscape design. New construction and renovations. Green historic preservation, feasibility studies, zoning studies and adaptive reuse; all building types.  
**Specialties:** Building Design/Construction, Landscape Design/Construction, Remodeling

**Sterling College**

Brown Library  
P.O. Box 72  
Craftsbury Common, VT  05827  
**Specialties:** Library, College/University, Environmental Education

**Stewart Brecher Architects**

Brecher, Stewart  
93 Cottage Street  
Suite F  
Bar Harbor, ME  04609  
Tel: 207-288-3747  
stewart@sbrecherarchitects.com  
**Description:** A small full service architectural firm providing human centered, environmentally responsible and appropriate design since 1984. We are licensed in Maine and New Hampshire.  
**Specialties:** Building Design/Construction, College/University, Energy Conservation

**Structures By Design, Inc.**

Ambroz, Edythe  
P.O. Box 1086  
Northampton, MA  01061  
Tel: 413-586-1086  
edy.ambroz@verizon.net  
**Specialties:** Building Design/Construction

**SunBug Solar**

Mitter-Burke, Andrea  
411a Highland Avenue  
Somererville, MA  02144  
Tel: 617-500-3019  
Fax: 617-412-3062  
andrea.mitterburke@sunbug.com  
www.sunbugsolaram.com  
**Description:** SunBug is a solar energy consulting and installation company with offices in sunny Somerville, Massachusetts. We are complete solar installers, offering site analysis, system design, rebate processing, and system monitoring. We are professional solar installers, not general contractors, so we think several steps ahead and anticipate questions and challenges. We are certified by NABCEP, the National Board of Certified Energy Practitioners, for photovoltaic installations. We are approved for all available rebates through the Massachusetts Technology Collaborative’s Commonwealth Solar Program. All our solar installers, electricians and plumbers are licensed and fully bonded. As a company that provides environmentally intelligent solutions to energy production, we wholeheartedly believe that green is good. We consider environmental impact in everything we do, however we are not green for the sake of being green. As a company, we make choices based on practical sustainability. We are a specific shade of green: the most cost-effective green for our customers.  
**Specialties:** Photovoltaics, Green Electricity, Alternative Technologies

**SunEnergy Americas**

Holz, Robert  
235 Harrison Street  
Suite 203  
Syraucuse, NY  13202  
Tel: 315-579-2083  
robert.holz@sunenergy.eu  
www.suneintegrated.com  
**Description:** Solar Integrated is a renowned pioneer and leader in commercial, industrial and institutional solar applications. Solar Integrated provides turnkey PV-solutions for large low-slope roofs as are common for retail outlets, logistic centers and industrial facilities as well as municipal buildings and landfill sites. As a global solar solutions provider, Solar Integrated combines various technologies to develop the best PV-system for every customer’s specific needs for utmost reliability, productivity, financial performance and environmental benefits. Today Solar Integrated is part of the Energy Conversion Devices group (ECD) an alternative energy company that also owns the PV-module manufacturer UNI-SOLARÆ. This constellation allows Solar Integrated to draw on the vast experience of UNI-SOLARs industry leading roofing material partners and their ability to produce long lasting, heavy-duty materials. The UNI-SOLAR PV-technology has been installed since more than 10 years and has been tested under severe conditions ranging from space, ocean to dessert applications.  
**Specialties:** Alternative Technologies, Photovoltaics, Manufacturing

**Sungage**

Ross, Sara  
82 Cottage Street  
Amherst, MA  01002  
Tel: 413-687-5129  
sara@sungagelcc.com  
**Specialties:** Finance/CPA, Photovoltaics

**Sunlight Solar Energy, Inc.**

Oxman, Rachel  
4 Oxford Road  
Suite D8  
Milford, CT  06460  
Tel: 888-78-SOLAR  
Fax: 541-322-1911  
rachel.oxman@sunlightssolar.com  
www.sunlightsolar.com  
**Description:** Sunlight Solar is dedicated to educating our customers, empowering them to make...
We also carry composting equipment, high efficiency lighting and appliances, magazines, books, and more.

**Specialties**: Consumer Information, Photovoltaics, Solar Hot Water

### The Knoer Group, PLLC

Knoer, Robert  
424 Main Street  
Suite 1820  
Buffalo, NY 14202  
Tel: 716-332-0032  
kroener@knoergroup.com

**Specialties**: Public Policy, Legal

### The United Illuminating Company & CT Energy Efficiency Fund

Burns, Patrick  
P.O. Box 1564  
157 Church Street M5 1-6B  
New Haven, CT 06505  
Tel: 203-499-3504  
Fax: 203-499-2800  
patrick.burns@uinet.com  
www.uinet.com

**Description**: The United Illuminating Company (UI) is an administrator of the Residential and Commercial & Industrial Energy Efficiency Programs through the Connecticut Energy Efficiency Fund (CEEF).

The CEEF promotes efficient energy use, helps residents and businesses save on their electric bills, advances economic development, reduces electric demand and helps reduce air pollution. UI and CL&P administer the CEEF through conservation programs that serve residential customers, including fixed-income customers, as well as business and municipal customers. Connecticut’s energy efficiency programs are funded by a charge on customer bills. Additional information on Connecticut’s energy-efficiency programs can be found at www.ctenergyinfo.com.

**Specialties**: Building Design/Construction, Energy Conservation, Remodeling

### Timeless Architecture

MacLean, Henry  
147 School Street  
Milton, MA 02186-3513  
Tel: 617-696-6448  
hmaclean@timearch.com  
www.timearch.com

**Description**: Timeless Architecture is an architectural office specializing in residential & light commercial work, focused on the integration of historic preservation and green design.

**Specialties**: Building Design/Construction, Energy Conservation, Remodeling

### TNT Electrical Contractor, LLC

 Mahoney, Troy  
371 White Oaks Road  
Weirs Beach, NH 03246  
Tel: 603-455-4217  
Fax: 603-528-9498  
tntelelectric@metrocast.net  
www.tntelectricalcontractor.com

**Specialties**: Photovoltaics, Wind, Green Electricity

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### New England

The company’s special expertise is planning and creating communities of quality, energy-efficient homes, and building and remodeling for homeowners.

**Specialties**: Building Design/Construction, Remodeling

### The Valle Group, Inc.

DeMello, Julie  
70 East Falmouth Highway, #3  
East Falmouth, MA 02536  
Tel: 508-548-1450  
Fax: 508-548-1950  
jad@vallegroup.com

**Description**: The Valle Group sets the standard for thoughtfully-planned communities in southern

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### Sustainable Energy Analytics

Rhodin, Jeffrey  
32 Lincoln Street  
Lexington, MA 02421  
Tel: 781-652-8282  
jrhoedin@seanalytics.us.com

**Description**: Sustainable Energy Analytics, LLC is dedicated to helping homeowners and their agents (architects, builders, and realtors) plan and execute their move from fossil fuels to renewable energy sources, such as geothermal and solar, along the most economical path, unbiased by product or technology loyalties. We build customized energy models of our client’s home allowing us to simulate the performance of the building shell (envelope) and the heating and cooling system, both current and proposed. The models give us the ability to identify the optimal steps, priorities, costs, and expected benefits. A typical objective of our clients is to fund the proposed improvements from the expected savings, resulting in no out-of-pocket expenses. Instead of paying the company that delivers your fuel, you pay yourself. The results of our analyses are documented in our Sustainable Energy Roadmap; so our clients can move along at their own pace. If our clients are too busy or need assistance we provide project oversight and management services to speed implementation.

**Specialties**: Alternative Technologies, Energy Audit Services, Energy Conservation

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### Fine, Lawrence

9 Lake Boon Drive  
Hudson, MA 01749-3033  
Tel: 978-562-9223  
Fax: 617-277-2499  
twistlehart@tskp.com  
www.tskp.com

**Description**: Seasoned group of licensed professionals dedicated to exceeding client expectations and to excellence in design, in which the essential elements entail harmony with the surrounding environment, natural lighting and energy efficiency.

**Specialties**: Building Design/Construction, College/University

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### The Boston Solar Company

Strecker, Romain  
10 Churchill Place  
Lynn, MA 01902  
Tel: 781-715-3983  
romain@bostonsolar.us

**Specialties**: Energy Audit Services, Photovoltaics

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### The Energy Conservatory

Spevak, Frank  
2801 21st Avenue S, Suite 160  
Minneapolis, MN 55407  
Tel: 612-827-1117  
Fax: 612-827-1051  
fspevak@energyconservatory.com  
www.energyconservatory.com

**Description**: The Energy Conservatory (TEC) manufactures precision diagnostic equipment used to solve comfort, energy use, durability and air quality problems in buildings. Our reputation for innovative design and excellent technical support have made us a leading manufacturer of performance testing tools for the building industry.

**Specialties**: Manufacturing, Alternative Technologies

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### The Energy Emporium

Quirk, Kimberley  
P.O. Box 351  
Enfield, NH 03748  
Tel: 603-632-1263  
kim@energyemp.com  
www.energyemp.com

**Description**: The Energy Emporium is a showroom, information center and full service sales, installation and support for solar electric systems, solar hot water, wind and water turbines.

**Specialties**: Alternative Technologies, Indoor Air Quality, Insulation

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### Sustainable Retreats

Fine, Lawrence  
371 White Oaks Road  
Weirs Beach, NH 03246  
Tel: 603-455-4217  
Fax: 603-528-9498  
tntelelectric@metrocast.net  
www.tntelectricalcontractor.com

**Specialties**: Photovoltaics, Wind, Green Electricity

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### The Valle Group, Inc.

DeMello, Julie  
70 East Falmouth Highway, #3  
East Falmouth, MA 02536  
Tel: 508-548-1450  
Fax: 508-548-1950  
jad@vallegroup.com

**Description**: The Valle Group sets the standard for thoughtfully-planned communities in southern
**Torcon Energy Services**
Gerard, Robert
328 Newman Springs
Red Bank, NJ 07701
Tel: 732-704-9800
rggerard@torcon.com
www.torcon.com

**Description:** Torcon delivers true expertise to customers on every project. With four decades of experience encompassing many of the largest, most technically complex facilities in the U.S., Torcon has the resources and capabilities to manage any project and staff who will take the time to learn what makes yours unique.

Construciton management services encompass a lot of moving parts that combine to deliver predictable results through strategic management and controls. As one of the nation’s largest CM’s, Torcon provides a comprehensive range of services that are truly state-of-the-art. We also offer alternate service delivery approaches that are customized to meet the individual needs of our clients. Regardless of your choice, you can count on Torcon to be the ultimate partner in your project’s success.

**Specialties:** Building Design/Construction, Energy Conservation

**TruexCullins Architecture and Interior Design**
Weeks, Susan
209 Battery Street
Burlington, VT 05401
Tel: 802-488-8232
Fax: 802-658-6495
sweeks@truexcullins.com
www.truexcullins.com

**Description:** This architecture and development firm is for clients who seek alternatives to wasteful building practices. We offer cost effective design solutions that help the environment and enhance design and comfort. Truth Box also offers consultation on building development and can be a versatile partner in small to mid-sized projects that generate value from thoughtful design and high energy efficiency.

**Specialties:** Building Design/Construction, Energy Conservation, Real Estate

**Truth Box, Inc.**
Case, Peter Gill
460 Harris Avenue Unit 104
Providence, RI 02909
Tel: 401-453-1300
pge@truthbox.com
www.truthbox.com

**Description:** At Truex Architects we design Fine Green Homes. We believe that you should live in a home you cherish today and would be proud to leave your grandchildren tomorrow.

**Specialties:** Building Design/Construction

**Unitil**
Palma, Thomas
325 West Road
Portsmouth, NH 03801
Tel: 603-294-5172
Fax: 603-294-5272
palma@unitil.com
www.unitil.com

**Description:** Unitil Corporation (“Unitil”) is a public utility holding company headquartered in Hampton, New Hampshire. Unitil’s principal business is the local distribution of electricity and natural gas in the states of New Hampshire, Massachusetts and Maine. Unitil is the parent company of three distribution utilities: (i) Unitil Energy Systems, Inc., which provides electric service in the southeastern seacoast and state capital regions of New Hampshire; (ii) Fitchburg Gas and Electric Light Company, which provides both electric and natural gas service in the greater Fitchburg area of north central Massachusetts; and (iii) Northern Utilities, Inc., which provides natural gas service in southeastern New Hampshire and portions of southern and central Maine. In addition, Unitil is the parent company of Granite State Gas Transmission, Inc., an interstate natural gas transmission pipeline in New Hampshire and Maine. Together, Unitil’s operating utilities serve approximately 100,300 electric customers and 69,300 natural gas customers. Unitil’s non-regulated business unit, Usource, also provides energy brokering and advisory services to large commercial and industrial customers in the northeastern United States. In addition, Unitil provides energy efficiency services to its customers in MA, NH, and ME.

**Specialties:** Alternative Technologies, Energy Conservation, Green Electricity

**Upstate Solar, LLC**
Fitzmaurice, William
35 Broad Street
Catskill, NY 12414
Tel: 518-947-0208
upstatesolar@mhccable.com
www.upstatesolar.net

**Description:** There is an abundance of free energy coming from the sun every day. With our products you can tap into this free heat & power quickly & without major modifications to your house.

**Specialties:** Photovoltaics, Space-Heating/Cooling, Retail

**Van Natta Co., LLC**
Van Natta, Jim
403 South Mountain Road
Northfield, MA 01360
Tel: 413-834-5329
jimvann@comcast.net

**Specialties:** Building Design/Construction, Consultant

**Vanasse Hangen Brustlin, Inc.**
Roy, Leo Pierre
P.O. Box 9151
101 Walnut Street
Watertown, MA 02471-9151
Tel: 617-924-1770
Fax: 617-924-2286
RoyL@vhb.com
www.vhb.com

**Description:** Large East Coast civil engineering firm offering planning, land development, transportation and environmental services. Specialize in environmental planning and sustainable design.

**Specialties:** Landscape Design/Construction, Public Policy, Wind, Biomass

**Via Builders**
Caton, Paul
23 Townsend Street
Barrington, RI 02806
Tel: 401-525-0176
tabercaton@cox.net

**Specialties:** Building Design/Construction

**Wagner Solar, Inc.**
Gaebler, Joerg
485 Massachusetts Avenue
Suite 300
Cambridge, MA 02238
Tel: 617-230-5604
joerg.gaebler@wagner-solar.com
www.wagner-solar.com

**Specialties:** Domestic Water Heating, Photovoltaics, Space Heating/ Cooling
Walden Street Web Services
Lapointe, Stephen
1619 Massachusetts Avenue
Cambridge, MA 02138
Tel: 617-864-0770
stephen@waldenstreet.com
www.waldenstreet.com
Description: Walden Street offers a suite of hosted web services to support the missions of leading sustainability organizations. Applications include web-based energy monitoring and customizable solutions for search, news, and mapping.
Specialties: Consumer Information, Environmental Education, Photovoltaics

Wesson Energy Inc.
Wesson, William
P.O. Box 2127
165 Railroad Hill Street
Waterbury, CT 06722-2127
Tel: 203-419-5046
Fax: 203-754-6664
wwesson@wessonenergy.com
www.wessonenergy.com
Description: Wesson Energy is a progressive energy partner specializing in modern, high-efficiency solutions and comprehensive home comfort service. We help homeowners and businesses integrate alternative energy sources, including solar and biofuel, without compromising on comfort.
Specialties: Domestic Water Heating, Energy Audit Services, Energy Conservation

William Maclay Architects Planners
Maclay, William
4509 Main Street
Waitsfield, VT 05673
Tel: 802-496-4004
Fax: 802-496-4007
wmap@wmap-aia.com
www.wmap-aia.com
Description: WMAP is an award-winning architectural firm specializing in collaborative, integrative design incorporating energy and resource conservation, renewable energy use, optimal indoor air quality, healthy building design technology, and environmentally responsive land use planning.
Specialties: Alternative Technologies, Building Design/Construction, Research

Waterline Alternative Energies, LLC
Deeb, Gina
7 London Lane
Seabrook, NH 03874
Tel: 603-474-0170
waesales@waterlineae.com
www.waterlinecompanies.com
Description: Turn-Key alternative energy solution provider, specializing in solar, wind and hydroelectric technologies for residential, commercial and municipal buildings throughout New England. The use of our own on-staff designers, electricians, and installers allows for realistic schedules, guaranteed successful project deployment and on budget projects.
Specialties: Hydroelectric, Photovoltaics, Wind

Window Quilt
Digney, Larry
22 Browne Court
Unit 105
Brattleboro, VT 05301
Tel: 802-246-4500
Fax: 802-246-4505
larry@windowquilt.com
www.windowquilt.com
Description: Window Quilts raise the R-value of single pane windows beyond that of typical replacement windows. They raise mean radiant temperature, so rooms are comfortable at lower temps.
Specialties: Energy Conservation, Insulation, Windows

Wolfworks, Inc.
Wolf, Jamie
195 West Main Street
Avon, CT 06001
Tel: 860-676-9238
jamie@homesteadfit.com
www.homesteadfit.com
Description: We are guides. We guide a process for clients who are prepared to design and build collaboratively and responsibly. Together we create spaces that look great, work well and feel good to be in. We rely on building materials and energy to create a project. Our choices are guided by the opportunity to use materials and energy wisely. This means seeking solutions that make the best use of available space before constructing additional space. It means striving to use energy efficient equipment and construction strategies. It means seeking materials that are durable, safe, and resource efficient. We expect to respect what we use.
We are trained to design and build using the Passive House Planning Package to produce extraordinarily low energy buildings. We think solar is for dessert—after you eat your veggies!
Specialties: Building Design/Construction, Remodeling

ZeroEnergy Design
Prince, Adam
348 Medford Street
Boston, MA 02129
Tel: 617-720-5002 x102
aprince@zeroenergy.com
www.zeroenergy.com
Description: Innovative design embracing energy, environment, and lifestyle. Architecture, Mechanical Engineering, and Energy Consulting.
Specialties: Building Design/Construction

Zetland Homes, LLC
Reddy, Steve
P.O. Box 146
Hopkinton, NH 03229-0146
Tel: 603-746-3556
Fax: 603-746-4513
zetlandhomesllc@comcast.net
www.zetlandhomes.com
Description: Builder of high performance and green homes. Choice of home types: stick built and SIP; Log; TimberFrame; ICF; Modular; and Historic Reproduction.
Specialties: Building Design/Construction
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