



12th annual  
**GREEN LIVING  
& ENERGY EXPO**

## PRESENTATION SCHEDULE Roanoke Civic Center November 4-5, 2011

*Presentations will be made in the  
designated enclosed area in the lobby  
outside the Expo exhibit area*



Presented by Community Housing Partners

<p><b>Friday 10:30</b> <b>Bryan Walsh</b> "Practical Photovoltaics"</p>	<p>This presentation will cover 1) Photovoltaic solar panels: type; frames; energy density; connectors; temperature coefficients; glass-to-frame ratios; degradation factors; 2) Mounting methods: pole mounts; pipe racks; roof mounts; 3) Inverters (grid-tie &amp; grid-interactive): types; efficiency; mounting; 4) Maintenance for grid-tie, or grid-interactive systems; 5) Evaluating the factors when choosing a manufacturer for materials and contractor to install your system; 6) Photovoltaic Economics: pay-back time; renewable energy credits; federal tax credit; VA state rebate requirements; loans</p>	<p><b>Bryan Walsh</b>, owner of Solar Connexion, is a long time renewable energy advocate and specialized licensed contractor in the field of photovoltaic solar energy. He has been professionally installing solar electric systems since the mid 1980s, and began Solar Connexion in 1993. Since then, the business has installed a vast range of renewable energy systems including solar (off-grid, grid interactive with battery, straight line-tie, and generator interactive), wind generators, and solar water heaters. His focus is planning, building, and providing on-call service for high quality installations for both residential and commercial customers.</p>
<p><b>Friday 11:30</b> <b>Monica Rokicki and Barry Martin</b> "Treasure Hunting: Return on Investment for Homes, Commercial Buildings and Industrial Facilities"</p>	<p>The treasure hunt begins with establishing a verifiable, measurable benchmark through a building performance assessment. By optimizing strategies specific to the type of building and the owners' budget, return on investment for performance upgrades can be much higher than what you might expect from the stock market, even in the best of economies. Barry Martin and Monica Rokicki will explain the steps in the process and different strategies for residential, commercial and industrial facility upgrades.</p>	<p><b>Barry Martin</b> (Owner of Advanced Building Performance Group, est. 2007) and <b>Monica Rokicki</b> (formerly Director of Design and Sustainability at Balzer &amp; Associates, Inc.) joined together in July 2011 to form Better Building Works, LLC. The mission of the company is to provide a range of building performance services to enhance the functional, aesthetic and market value of homes and workplaces by offering customized, strategic and verifiable solutions for commercial and residential clientele.</p>
<p><b>Friday 12:30</b> <b>Adam Cohen</b> "Passivhaus in the US. How far have we come and where are we going?"</p>	<p>The Passivhaus concept represents today's highest energy-efficient design standard with the potential of slashing the heating energy consumption of buildings by an amazing 90%. This presentation will provide a brief look at the history of Passivhaus technology with a review of current status of Passivhaus, both physically and legislatively. Attendees will also get a look into the near future in the Passivhaus movement in the United States.</p>	<p><b>Adam Cohen</b> is a principal partner in Structures Design/Build, LLC. He holds a degree in architecture from the Univ. of Maryland and is a Certified Passive House Consultant, LEED AP, and Certified Green Professional. He is a board member of the Roanoke City Clean and Green Committee, the Roanoke Clean Valley Council, the Green Schools Committee of the USGBC of SWVA, the Renewable Energy and Electric Vehicle Association and the Technical Committee of the Passive House Institute US.</p>
<p><b>Friday 1:30</b> <b>Steve Sunderman</b> "Paving the Way to a Sustainable Triple Bottom Line"</p>	<p>For many years the default paving material for building our highways, roads and parking lots has been oil-based asphalt. This presentation demonstrates how various paving materials impact sustainability and our triple bottom line ("People, Planet &amp; Profit"). We compare asphalt with concrete &amp; other composite paving materials for carbon footprint, durability, total embodied energy, pollutants, fuel economy, storm water management, natural resource conservation, public safety, urban heat island effect, and noise pollution.</p>	<p>Terrazia President, <b>Steve Sunderman</b>, is a licensed architect with LEED AP BD+C specialty who implements sustainable building strategies that save money, and improve people's lives. Terrazia PC is an environmental and energy conservation consultancy that provides comprehensive high performance building design, construction and operations strategies as a means to conserve financial and natural resources and create healthy environments. His experience includes design, project management and energy/utility audits. He has had a passion for alternative energy, conservation and equitable environmental design since the early 1970's</p>
<p><b>Friday 2:30</b> <b>Rich Backus</b> "What Makes It Green? The Core of Green Building"</p>	<p>This presentation will offer a systematic overview of the building science which is the core of green and sustainable building practices. Focus areas include site design and development, resource efficiency, indoor air quality, owner education, and – most importantly – energy efficiency.</p>	<p><b>Rich Backus</b> is representing Roanoke Regional Homebuilders Association at this event. He is a Certified Passive House Consultant, NAHB Graduate Master Builder, NAHB Certified Green Professional, founder and president of custom design/build firm Timber Ridge Craftsmen, Inc.</p>
<p><b>Friday 3:30</b> <b>Alan Wulff</b> "Importance of Controlling Solar Load and Adverse Thermal Transfer Through Windows"</p>	<p>To keep people comfortable, windows in buildings in the U.S. consume quadrillions of BTU's annually, according to EPA. Controlling even a portion of adverse window energy transfer can make a significant impact in energy use while maintaining or even improving comfort. Cost-effective, high performance, see-through window insulation can provide "all-season" solar control with radiant solar and heat gain rejection in summer, UV protection, and passive solar collection in winter, resulting in up to 30% or more in energy savings.</p>	<p><b>Allan Wulff</b> is President of Solar Tech, LLC. He is a Registered Professional Engineer and a Graduate of the University of Minnesota</p>

<p><b>Friday 4:30</b>  <b>Bill Warren “Air Leakage Testing in Large Buildings”</b></p>	<p>Large building air leakage testing is an important new whole building performance measurement tool. Beyond the measured air leakage performance benefits, there are numerous case studies where this type of testing regularly identifies and corrects design and construction deficiencies that affect building durability and indoor environmental quality. This presentation will provide an overview of testing options, and what needs to be done to design and construct rigorous air barriers in small-to-large commercial and institutional buildings</p>	<p>Bill Warren is a nationally recognized building science expert. He is the barrier team leader for Southern Energy Management, a North Carolina-based regional sustainable energy company. His team provides consulting and testing services to meet the new Army Corps of Engineers air leakage testing requirement. As of August 2011, the team's work amounts to 60 plus building projects totaling over three million square feet.</p>
<p><b>Saturday 10:30</b>  <b>Gregg Lewis “Residential Energy Efficiency Upgrades: There Has Never Been a Better Time”</b></p>	<p>This presentation will describe the process that homeowners can use to assess their home's energy performance and the steps they can take to improve that performance. Attendees will learn the what, why, and how of engaging qualified contractors, ensuring that the work is done to the highest possible standard, and where homeowners can find incentives, rebates and low interest loans to complete their work and make their homes less expensive to operate, more comfortable, and safer for their families</p>	<p><b>Gregg Lewis</b> holds a Master of Architecture (Yale, 1998) and a Master of Business Administration (Wake Forest, 2010). He was the first LEED Accredited architect in Western Virginia and is a certified EarthCraft builder. He completed the region's first LEED Gold Certified building (Claude Moore Education Complex). He was named one of 25 National Environmental Champions by EnvironDesign magazine in 2005 and was awarded the 2005 Dogwood Award by the Virginia Conservation Network. His firm was a 2008 Roanoke Regional Chamber of Commerce Small Business of the Year. He is the Executive Director of Community Housing Partners' newly formed <b>community alliance for energy efficiency, or cafe<sup>2</sup></b></p>
<p><b>Saturday 11:30</b>  <b>Ed Ricci “Geothermal – Using the Earth to heat your House”</b></p>	<p>Did you know that 70% of our utility costs come from our heating, cooling and hot water? This presentation will show you how to use less energy on all three using a geothermal heat pump. Attendees will learn about the operation and installation of this system from the loop to the hot water assist. The presentation will also explain return on investment calculation and availability of a 30% tax credit.</p>	<p><b>Ed Ricci</b>, owner of Energy Management Services, has been in the HVAC business for 16 years, 13 of which has been dedicated to Water Furnace Geothermal heat pumps. He is a Geo Pro Master Dealer, has certificates in EarthCraft green building, geothermal load studies and design, radiant floor heating systems, manual J load calculations, high efficiency heat pumps, fossil fuel boilers and furnaces. His company has installed over 80 geothermal systems.</p>
<p><b>Saturday 12:30</b>  <b>Fred Øesch “Your Affordable Green Home: Retrofits, Additions, &amp; New Construction”</b></p>	<p>A practical overview of materials, systems, and methods by which you can utilize cost-effective means to achieve affordable green building. By following the ideas and examples presented, you will be better informed, inspired, and empowered to complete your own Design &amp; Building projects.</p>	<p><b>Fred Øesch</b> is principal of Øesch Environmental Design near Charlottesville. He has designed and built healthful, energy efficient, alternative architecture, custom interiors, furniture, and fine art for 30+ years. His specialties include: solar design, green timber frame, straw bale construction, living earth roofs, and organic environmental control systems. He has a Master of Architecture degree and extensive experience in construction technology, product design, and fine art. He has developed internationally marketed furniture and architectural software. His projects have been featured on Home and Garden Television, and in numerous publications. He has received several awards from Virginia Sustainable Building Network</p>
<p><b>Saturday 1:30</b>  <b>Gunther Hauk “Toward Saving the Honeybee”</b></p>	<p>The honeybees are at the very ground level for our food security and sustainability. Not only the poison-addicted, mono-culture driven conventional agriculture, but also our exploitive beekeeping methods have brought this insect to the brink of existence. Colony Collapse Disorder is THE wakeup-call for reviewing and changing the way we work with nature as fast as possible. Otherwise, we will be hand-pollinating our fruit, as they do already in one area of China.</p>	<p>Gunther Hauk has been an educator, biodynamic gardener/farmer and beekeeper for nearly four decades. In 1996 he co-founded "The Pfeiffer Center" for biodynamic and environmental studies in Spring Valley, NY, and together with his wife Vivian, "Spikenard Farm" in 2006. Their Spikenard Farm Honeybee Sanctuary, a not-for-profit organization, has been located in Floyd County since Fall 2009.</p>
<p><b>Saturday 2:30</b>  <b>David Zachow and Rick Brown “What's New in Photovoltaics?”</b></p>	<p>Photovoltaic solar cell products have advanced tremendously in recent years in terms of quality and affordability. This presentation will cover the latest changes in Inverters, PV panels, battery storage and newer technologies. Attendees will learn about what products are available now and being researched in the laboratory.</p>	<p><b>David Zachow</b>, owner of Direct Connect Solar &amp; Electric, is a Master Electrician and LEED AP who has installed dozens of PV systems in the Roanoke region. His focus has always been on education and energy conservation as an integral part of any PV installation. <b>Rick Brown</b> has spent years working in the electronics industry as a design engineer. He brings his talents and enthusiasm to the solar field as a service engineer working on grid tied and Battery based PV systems. Rick's house is solar powered, just like his vegetable garden.</p>